

American News

Allende faces split with left extremists

By Hugh O'Shaughnessy

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SANTIAGO, Nov. 2. AN OPEN CALL to insurrection against the Government of President Salvador Allende was made last night by Sr. Miguel Enriquez, Secretary-General of the MIR, the ultra left-wing group which has been organising violent take-overs of farms and businesses, and is now squabbling with the Government.
Enriquez specifically called for the abolition of Parliament and its replacement by a people's assembly, the takeover without compensation of farms and factories and the abolition of private education. The MIR leader was speaking at a meeting in the town of Temuco at a meeting to commemorate the death of a peasant who was killed during an attempted takeover of a farm. Enriquez launched the MIR's drive with the slogan "insurrection or death."
The campaign is extremely unlikely to receive support throughout the country where the MIR can count on only minimal support among voters. It could however be a serious irritation to the Government who completes his year of office tomorrow.
The MIR has developed a clear strategy among the aboriginal Mapuche peoples of southern Chile and its campaign of taking over farms has captured the imagination of many of the peasants who feel they were forced off their lands years ago by European immigrants. The MIR's reputation has also captured much attention in the United States and the international press.
After a period of uneasy compromise the MIR, which also claims some support among the urban poor, has now made a clear break with the Government. Dr. Allende is unlikely to tolerate such a challenge to his authority and there is likely to be a period of tension—even armed action—between Government forces and the extreme left.
He called to insurrection has been as a disgraceful development for the Chilean Communist Party, a strongly orthodox group line organisation which set its face firmly against such action.

U.S. War

SALVADOR ELECTIONS

Power in the hands of few

BY ALAN RIDING

THE STAGE is set for next year's Presidential elections in El Salvador, where the army-incumbent party is facing its first serious challenge from a coalition of Christian Democrats, ruling National Conciliation Party (PCN) is generally expected to win, but there is still doubt to make things interesting.
Since 1962, tiny overcrowded El Salvador has enjoyed a rare combination of economic growth and political stability under two military presidents, Colonel Julio Adalberto Rivera Fournier and General Fidel Chvez Hernández. Of course, with and stability are relative. Central American Common Market stimulated El Salvador's economy and breathed life into the industrial sector, but little of the new wealth reached its 3.5 million inhabitants. In politics, the country has gone ten years without a coup, and General Sánchez Hernández should be the second successive president to complete his term, although the army still holds the last word in politics.
Two cautiously-reformist administrations have pointed El Salvador in the right direction, without taking it far down the road of change.

A coalition

Even without intentional fraud, elections cannot be really fair. For example, President Sánchez Hernández will place the entire government machinery at the disposal of the PCN candidate. Christian Democrats will be campaigning under the shadow of the question of whether the army will let them in office if they win. In addition, what began as a simple election between Government and opposition parties is now being riddled by challenges to the Government from the Right and the Left. The splintering of political opinion could even prevent the winning party from obtaining an overall majority, thus throwing the issue into Congress and leaving the army to have the last say.
For the moment, however, the Government would seem to be in the strongest position, even though it struggles to pick a candidate. The party in a state of confusion. There is a tradition in El Salvador—albeit a short one—that the President has a considerable influence over the nomination of the PCN candidate, who is usually a non-controversial, low-profile army officer. To achieve this, however, the more ambitious and well-known candidates have to be publicly discredited. This is done

by launching them as possible candidates, then ensuring that their reputations are ruined by controversy. In the end, in a gesture of apparent compromise, the President pulls out the name of his choice—and voila!
This year, the scenario was only slightly changed because of the consensus that El Salvador's UN ambassador, Reynaldo Galindo Pohl, should be the PCN candidate. Highly respected at home and abroad, Galindo Pohl was the only civilian candidate acceptable to the army. But the ambassador turned down the offer on the grounds that he had been chosen in an undemocratic way and that Salvadoran Presidents were still prisoners of the army. His refusal sparked off a massive scramble for power.
The first name that sprang to mind was General José Alberto Medrano, former head of the National Guard and hero of El Salvador's brief war with Honduras in July 1969. Medrano, a colourful character who has considerable popular support, had been the Far Right—the even had the word "Vietnam" stitched onto his uniform—and was sponsored for the nomination by wealthy industrialists and coffee-planters who were distressed by the Government's modest social reforms. But the President and much of the army were determined that Medrano should not make it. First, Medrano was removed from his post at the National Guard—which had given him control over the countryside—and was offered the job of Salvadoran representative in San Francisco. Then, out of the blue on February 19, a wealthy businessman, Ernesto Regalado Dueñas, was kidnapped—and later murdered—by unidentified terrorists. During the search for Regalado, Medrano shot and killed a police officer. The General was immediately arrested and charged with murder, but he was acquitted after four months in jail when his plea of self-defence was accepted.

The nod

By early September, the choice was narrowed down to a trio of army officers; and by the end of the month, the nod was given to Colonel Arturo Armando Molina, 44, a little-known and thoroughly non-controversial character who has been the President's private secretary for the past 30 months. Dr. Enrique Mayorga Rivas, 48, a lawyer who has been Secretary General of the Presidency since 1967, was chosen as PCN candidate for Vice-President. The selection of these two candidates—both of them President's Men—was a

cent increase in the price of shares to \$7,500 each and the limitation of shareholding to new members of 600 valued at \$4.5m.
In addition the Governors decided that there should not be more than 3,450 new votes or more than four new directors. The Bank at present comprises 16 members—14 from the Commonwealth Caribbean plus Britain and Canada.
A meeting of the Board which ended here over the week-end drafted conditions on which new members may be admitted to the Bank. These include a 50 per

Three times

The Christian Democrats formed a coalition, called the National Opposition Union (UNO), to prevent just the kind of splintering that the PCN is suffering on the Right. Two small left-of-centre parties, the Movement for National Revolution (MNR) and the National Democratic Union (UDN), agreed to support the Presidential candidacy of José Napoleón Duarte, 46, the long-time Christian Democrat leader who was three times elected Mayor of San Salvador in the late sixties. MNR leader Guillermo Manuel Ungo is the candidate for the Vice-Presidency.
The Marxist Revolutionary Party (PR) and the Communist Party (PC) have decided to boycott the elections, but their negative impact is not expected to be important. Students at the University of El Salvador, which is dominated by extreme leftist factions, have already denounced the elections as a farce, but they would win little popular sympathy by demonstrating against the regime. A long-drawn-out teachers' strike through the summer disintegrated when student extremists took to the streets to support the strike. The Government withheld a response until the teachers had lost support and the general public was demanding an end to the demonstrations. Then it swiftly crushed the disturbances and saw the teachers sue for a compromise settlement in a matter of days. The UNO coalition is looking

to the middle classes and the urban poor to support its cause in the elections. In previous elections, the Christian Democrats have showed their strength mainly in the cities. The UNO's main theme is the urgent need for social, economic and political reform.
"We want to bring about a democratic and pluralistic society where people have a real voice in Government," Mr. Duarte told me as the campaign began in mid-October. "We want to increase the country's wealth and share it among the population." This sounds like a simple enough objective, but El Salvador offers a classic case of a country where economic power and social privilege are in the hands of a few families—known here as "The Fourteen." To these families, even the PCN's middle-of-the-road approach seems wildly radical.
Nevertheless, the long-term outlook is not black because the army is no longer willing to be used as a political instrument by these families. The UNO coalition even believes the army would allow it to take office. "I think so," Mr. Duarte said. "I think the officers are aware of the need for change and that we have the capacity, the desire for work and the honesty to bring this about."
However, the close identity between the army and the PCN will be reinforced as the Right swings away from the ruling party—leads most observers to doubt whether key generals and colonels would be willing to surrender power on July 1, 1972 in the unlikely event of the UNO coalition winning the elections.

Peace talks

Because of the many factions involved in the elections, El Salvador will be reinforced as a period of political tension. The Right may try to exploit El Salvador's unresolved conflict with Honduras, but most people seem to recognise that this is not a genuine election issue since the ball is currently in the Honduran court in the sporadic peace talks. Nevertheless, to protect its Right flank, the PCN may well concentrate on stressing the "Communist menace" of the UNO coalition and exploiting the fact that Christian Democrat dissidents were apparently responsible for the Regalado murder. However, if it is re-elected, then the moderate elements in the army should make their influence felt to implement the reforms that have been talked about in the current administration.

Rogers asks Congress to reverse Senate foreign aid veto

BY GUY DE JONQUIERES

WASHINGTON, Nov. 2.

THE Secretary of State, Mr. William Rogers, urged Congress today to reverse the Senate's veto of the foreign aid bill, which he called a "very serious blow" to U.S. foreign policy.
Mr. Rogers, who met with President Nixon for an hour this morning, will personally put his case to Congress tomorrow morning. He said he is confident that Congress will act responsibly by agreeing to reverse the damage which has been done.
Mr. Rogers said that the Administration believes that the foreign aid mechanism needs reforming, but that changes should only be made after lengthy consideration. In the meantime, he expects Congress to enact a new "continuing resolution" to extend the aid programme after November 15, when it is due to expire, for 90 days.
However, opposition to such a proposal has already been expressed by Senator J. William Fulbright, Chairman of the Foreign Relations Committee, and by Senator George McGovern, the leading Vietnam war critic, on the grounds that it would extend military aid programmes. Senator McGovern announced today that he will offer, instead, a resolution to re-draft the Foreign Aid Bill, restoring economic and develop-

Caribbean Bank limit

BY OUR OWN CORRESPONDENT BRIDGETOWN, Nov. 2.

THE BOARD of Governors of the Caribbean Development Bank has decided here to limit the expansion of the bank so that Commonwealth Caribbean members will always have a majority of votes and directors.
A meeting of the Board which ended here over the week-end drafted conditions on which new members may be admitted to the Bank. These include a 50 per

St. Lucia may upset union plan

BY OUR OWN CORRESPONDENT

BRIDGETOWN, Nov. 2.

PLANS for the establishment of a new political union of the six Commonwealth Caribbean governments by March 1973 officially announced yesterday could be hampered by the unexpected reaction of the Premier of St. Lucia, Mr. John Compton.
St. Lucia is one of the signatories to the Grenada Declaration which gives a timetable for the establishment of the new State. Other signatories are Dominica, Grenada, Guyana, St. Kitts and Nevis. However, in an interview carried here by a local radio station, Mr. Compton said

his Government would have to re-examine its position because of the absence of three major eastern Caribbean territories—Antigua, Barbados and Trinidad and Tobago.
Mr. Compton said his Government had agreed to take part in the new State on the assumption that Antigua, Barbados and Trinidad and Tobago would also join. As the position now stands, he said, Guyana having about two-thirds of the population in the proposed union "It is an unbalanced affair and has got to be re-examined by St.

Stans to visit Moscow

By Guy de Jonquieres

WASHINGTON, Nov. 2. MR. MAURICE STANS, the Secretary of Commerce, will visit the Soviet Union later this month to discuss "a broad range of topics covering trade," the White House announced today. His visit has apparently been arranged as part of a series of bilateral consultations leading up to President Nixon's visit to Moscow next May.

The White House would not specify the main topics which Stans will discuss, but these are likely to include the Soviet plan to build a giant truck plant on the Kama River, in which several U.S. companies are participating. Although Mack Trucks recently withdrew from a preliminary agreement to undertake a \$750m contract there, other companies are said to be interested.

PERU DISCUSSES PEKING TIES

By Our Own Correspondent

LIMA, Nov. 2. PERU and the People's Republic of China exchanged notes today on establishing formal diplomatic relations between the two countries. The negotiations, which have been going on now for several months, were carried out in Ottawa.
Earlier this year Lima and Peking had established commercial relations and there is now a four man permanent Peruvian trade mission in Peking, and an equivalent in Lima which arrived a few weeks ago. Peru has already arranged the sale of and begun shipping copper, lead, zinc and fishmeal to China.
It is not known what China would export to Peru, although two years ago a Peruvian rice shortage was filled by imports from China. Peru voted for the entry of Peking to the UN but Foreign Minister General Edgardo Mercado Jarrin has since stated that Peru is not happy about the expulsion of Taiwan.

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Export News

Monocable ropeway for Bahrain smelter

Financial Times Reporter

BRITISH ROPEWAY ENGINEERING COMPANY part of the Glover Group, of Sevenoaks, Kent, has completed the installation of a 6½-mile monocable ropeway which will enable Aluminium Bahrain (ALBA) to produce 90,000 metric tons of aluminium a year in the smelter built by British Smelter Constructors (George Wimpey, Asahi and John Brown Engineering).

New rolling stock was shipped in August which will improve by about 25 per cent. the carrying capacity of the ropeway feeding raw materials to the smelter, the first in the Arabian Gulf.

Gas power

The ropeway is a vital component in the \$54m. project, to create new industries in Bahrain using oil revenue and to make use of the enormous surplus of gas power available. It forms the link between the smelter and the area reclaimed from the sea by George Wimpey, where the loading station is sited. The island store nearly 80,000 tons of alumina and petroleum coke required to produce aluminium or, in the despatch area, 3,000 tons of aluminium ingots.

For nearly four miles the ropeway, valued at \$375,000, passes over the sea, calling for special measures to guard against corrosion.

Because of the extreme fineness of alumina and its susceptibility to moisture and leakage, special buckets were designed, each holding 30 cubic feet with rubber-sealed filling lids and discharging doors at the bottom.

Petroleum coke is carried in the same buckets and the finished aluminium is transported back to the island jetty on tray carriers each taking a one-ton bundle. One tray is interposed between four bucket conveyors.

The whole system is operated by a 140-h.p. slip-ring motor at an angle drive station driving the main sheaves through spur and pinions.

By the addition of the new rolling stock the BRECO ropeway will enable the smelter ultimately to reach an output of 120,000 tons of aluminium a year.

BRITISH LEYLAND IN ISRAEL

Autocars faces demand to call in the Receiver

BY OUR OWN CORRESPONDENT

WITH complete deadlock in the negotiations between British Leyland Motor Corporation and the Israeli Government, it is likely that the local creditors of Autocars, in which Leyland is a 20 per cent. partner, will to-morrow apply to the court for the appointment of an Official Receiver to operate the company's three factories.

Following the financial difficulties in which Autocars found itself, negotiations started some weeks ago to put in additional cash. The local bank which is the main creditor was ready to provide Autocars with the equivalent of \$750,000 in additional credits on condition that British Leyland also supplied between \$300,000 and \$500,000, partly in the form of investment in equity, and assumed financial and management responsibility for the company.

The proposal was countered by BLMC with the demand that the Israeli Government should permit price rises on the BLMC products now made here (bus and truck chassis, Triumph cars and Triumph engine fibre glass cars) and provide the possibility for the manufacture of the mini Minor by granting greater fiscal protection for locally-made small cars, so as to provide the foundation for an annual profit of \$1.2m. The company has been in the red so far but with reorganisation and new management it could break even next year on the basis of present prices.

Protection

As \$1.2m. would be equivalent to 6 per cent. on turnover and 25 per cent. on investment, which was thought to be exaggerated, this was countered by the Israeli authorities with a proposal for price rises which, on the same basis, would yield an annual profit of \$700,000.

But they refused to grant greater protection for locally produced passenger cars. The Israeli authorities stressed that this was a final proposal.

Leyland submitted counter suggestions and Mr. Jack Plane, director of Leyland International, also informed the Israeli Government that his Board of directors had decided not to increase the investment or assume financial responsibility and management of the Israeli plant. At present BLMC holds 20 per cent. of Auto-

cars' shares and Mr. Y. Shubinsky, founder of Autocars, 80 per cent. Leyland has an option on 25 per cent. on Shubinsky's holding of stock. With the talks stalemated, the Leyland representatives left yesterday and Mr. Shubinsky is still trying to raise the necessary finance, but it is thought unlikely that he will succeed in doing so before to-morrow which is the deadline set by the local bank.

Pull-out

However, BLMC has assured the Israeli Government inter-ministerial committee which conducted the negotiations, that it will continue to supply kits for the assembly of trucks, buses and Triumph passenger cars here as well as spare parts for the fleet of buses now on the roads (Israel's entire bus system is equipped with Leyland vehicles and a large proportion of the trucks on the road are also Leyland, due to the monopoly status the company enjoys).

Richard Johns writes: a pull-out from Israel resulting from the financial troubles of Autocars, Haifa would probably enable British Leyland eventually to start trading with the Arab world again.

The company was black-listed by the Arab boycott of Israel in the spring of 1970 because of its investment at Ashdod and Haifa. An exception was apparently made for Land Rovers ordered for military purposes.

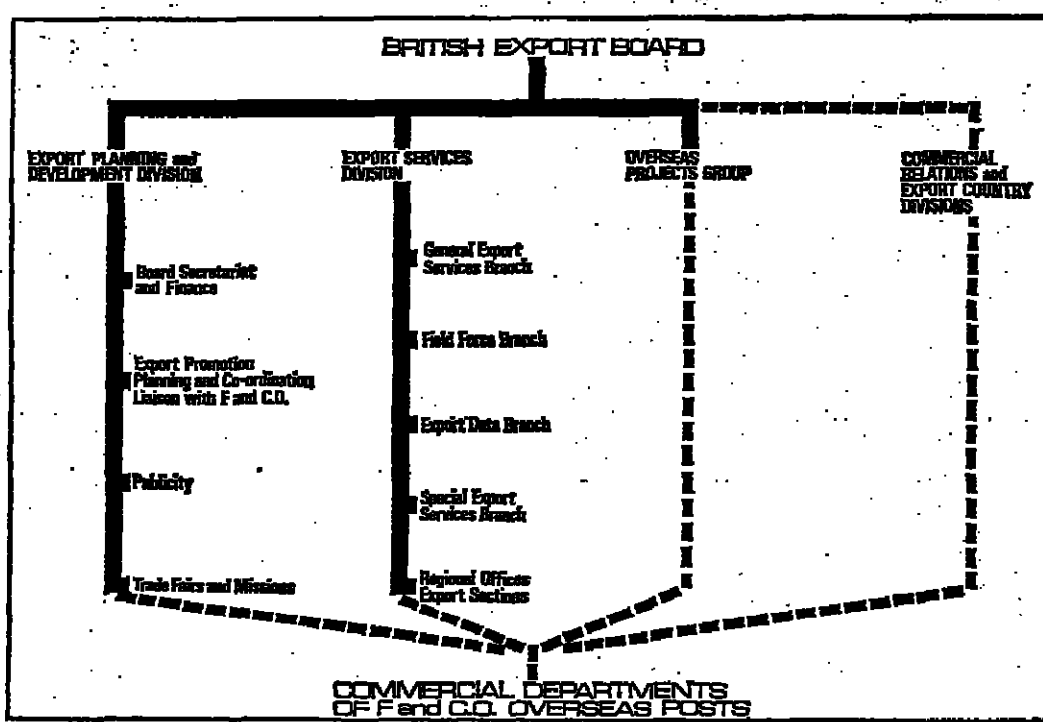
Before the merger between British Motor Holdings and Leyland early in 1968, the former's products were not on the ban. For two years British Leyland made great efforts to avoid its extension.

According to the most recent British Leyland report, sales to the Near East (a category which would include Israel and Iran) in the year ending September 1970, were worth \$25m. In 1968-1969 they were valued at \$31m.

Snap decision

An urgent order for nearly 250,000 bars of Kit-Kat weighing about 10 tons has been received by Rowntree Macintosh in York to meet a school meals contract in Abu Dhabi. Instructions were received in York on Thursday and the first consignment left the factory yesterday in cases packed and labelled over the weekend.

THE SHAPE OF THE BRITISH EXPORT BOARD



This diagram of the British Export Board's activities has been released by the Department of Trade and Industry, from which the Board will inherit about 1,300 civil servants dealing with promotions. The 18-man Board, yet to be named, will include a representative of the DTI and of the Foreign and Commonwealth Office. Its business members will, like Lord Thorneycroft, be unpaid.

Choice of Lord Thorneycroft goes down well with industry

BY DAVID CURRY, EXPORTS EDITOR

THE appointment of Lord Thorneycroft as chairman of the British Export Board has received an enthusiastic welcome from industry. The Board begins work on January 1 when it will bring under one roof the promotional work of the British National Export Council (which will be disbanded) and of the Department of Trade and Industry.

The chairman-designate's emphasis upon encouraging the work already done by chambers of commerce and trade organisations has endeared him to them, as they had shared the general fear that these activities would be sucked into a Civil Service limbo.

Forming groups

The London Chamber of Commerce and Industry, which had greeted the news of the demise of BNEC with dignified rapture, described Lord Thorneycroft as "an ideal choice."

It mentioned his work as chairman of SITPRO, the Board working on the simplification of export documentation.

Mr. Robert Booth, director of the Birmingham Chamber of Commerce and Industry thought Lord Thorneycroft was "admirably suited" for the job.

BEAMA, the British Electrical and Allied Manufacturers Association, also bestowed its accolade on Lord Thorneycroft. It gave its blessing to his belief

that the work of the Board should be organised around product areas.

The Association also called on the Board to "support the coordination of overseas capital projects on a comprehensive basis." Companies should be brought together in groups to bid for large capital projects, the Association explained, with the Board playing a co-ordinating role.

Industry clearly expects a strong European emphasis from the Board, since Lord Thorneycroft is chairman of two "European" companies, Pye of Cambridge and the U.K. part of the Pirelli operation.

At the same time many people

are puzzled that a Board which proclaims its intention to bring businessmen into the very offices of power should not follow the normal business procedure of paying its members for what Lord Thorneycroft has said will be fairly strenuous service.

The wholesale abandonment of BNEC staff (only 15 executives out of 164 will make the switch) is taken as an indication that the Government is unlikely to persist with the organisation by area of export activity. The chairmen of the BNEC area Boards are being consulted by the Export Board, but it seems that talks will be about little more than the passing on of know-how.

BUSINESS IN BRIEF

Peter Brotherhood plant contracts total £1.1m.

Peter Brotherhood of Peterborough, has announced contracts totalling £1.1m. for the supply of nylon spinning plant to Poland, Turkey and India.

The contracts have been awarded by Varimex, the Polish Government purchasing division and Sim-Chem.

The Polish order worth £700,000 is for a staple fibre plant for manufacturing Terylene at Torun, 150 miles from Warsaw. Delivery will start next June and will be completed by September.

The company commented: "The British Embassy in Warsaw gave valuable assistance during the negotiation of this contract. Poland is in the forefront of synthetic fibre manufacturing among the Eastern European countries and plans for expansion in this field may well provide an opportunity for further business."

The Swiss and British Governments have signed an agreement for the delivery of medium-girder bridge material worth Sw.Frs. 81.3m. for the Swiss Army. 6 tons per hour.

Delivery is to take place between 1972 and 1974. Financing of the purchase was approved by Swiss Parliament early this year.

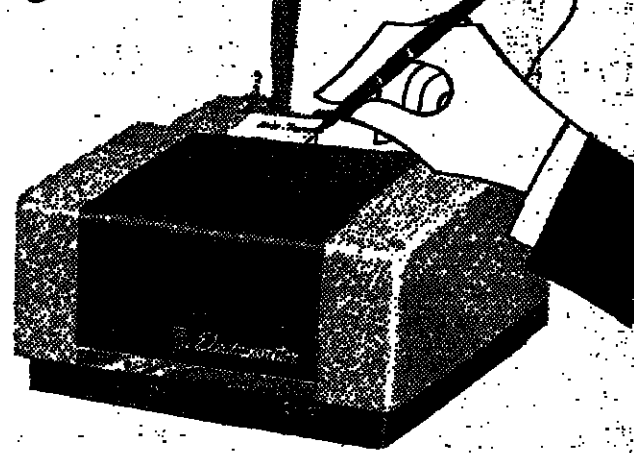
Linegear—a member of the Aberdare group—has won a further order for air brake isolators amounting to £183,000 and covering voltages of 161kV and 118kV.

The order was placed by Comissión Federal de Electricidad on behalf of the Compañía de Luz y Fuerza S.A.

The National Lead Company, of the U.S., has awarded a \$66,000 contract for a Sheppard magnesium casting machine to Harris Economy.

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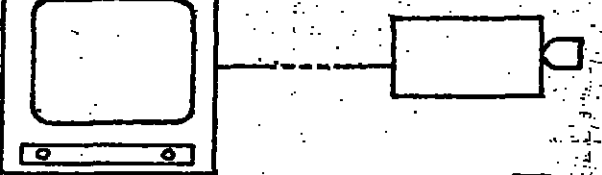
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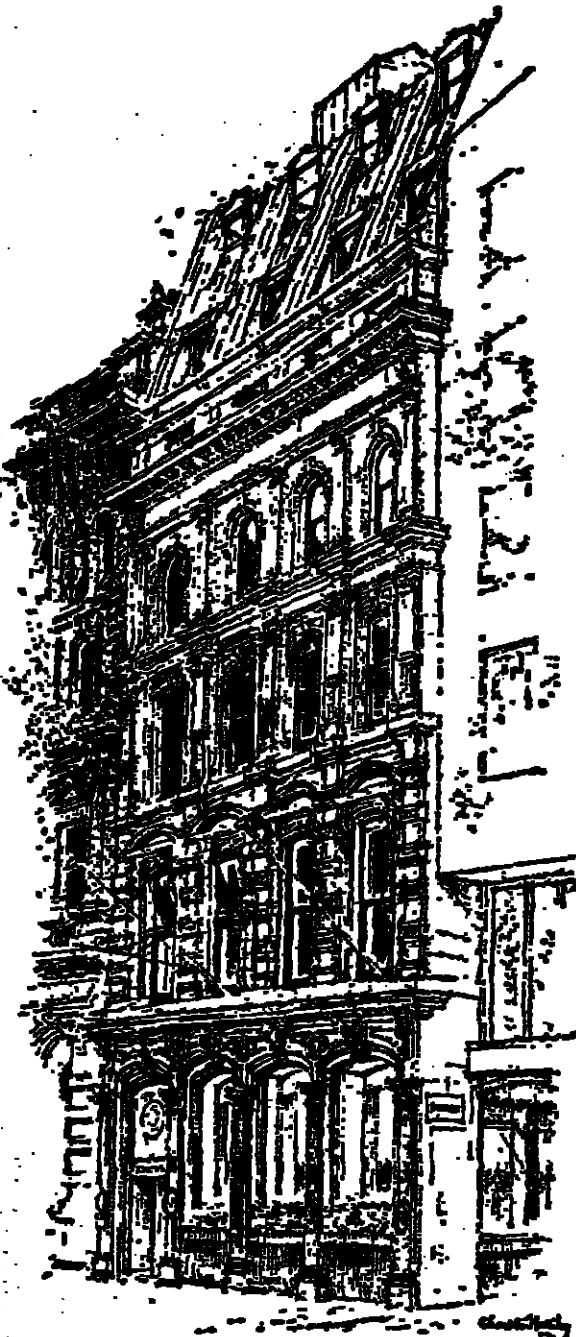
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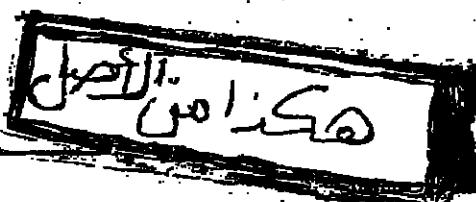
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November, 1971

Old uncertainties emerge

MADRID, Nov. 2.

Olavi Mattila, Minister in charge of EEC negotiations, becomes Foreign Minister, and Mr. Reino Rossi, leader of the Finnish EEC delegation, is made Minister of Foreign Trade.

Although it can do no more than parliament permits, the caretaker cabinet will probably be allowed to get through vital legislation such as the 1972 budget bill. After all, individual parties can disclaim responsibility at the polls for unpopular measures. But prolongation of the fiscal package, especially the extra 15 per cent turnover tax, beyond the end of the year seems unlikely.

More serious, though not Mr. Aura's headache, is the problem of finding a new prices and incomes policy for the period after March, 1972, when the current agreement between the unions and employers runs out. The atmosphere is over-heated, and there will surely, as before, be issues that will require Government agreement which a caretaker cabinet cannot promise on behalf of its unknown

It is possible that the new elections in January will "clear the air" and the "marriage" will be consummated in his farewell Press conference. But that is all. The same problems will remain to be settled: prices and incomes, the sale of the State to stable parliamentary Government and industrial peace. After being held up to the world as an example of the "Finnish economic miracle," Finland has embarked on a course of wage-cost inflation. "We have reached the moment of truth in the incomes policy," says the new Managing Director of the Finnish Employers' Confederation. "What lies ahead is a battle between the employer-union-government negotiations since the Finmark was devalued in 1967. They may even decide the fate of the Finmark in the next couple of years."

Mr. Teuvo Aura in London last week, when, as Mayor of Helsinki, he signed a \$15m. bond loan floated on the London market.

also the negotiations with the Common Market, which will probably gather some momentum by the end of the year.

Mr. Aura has picked a strong team. His Deputy Premier and Finance Minister is Mr. Paavo Hetemäki, until recently chairman of the employers' confederation and now a member of the Board of the Bank of Finland.

The immediate cause of the demise of the Karjalainen cabinet was the intransigent stand on agricultural incomes taken by the Social Democrats and the Centre (formerly Agrarian) parties, the two biggest government parties. But the nominal cause does not really matter, nor is there any point in trying to apportion blame for Mr. Ahti Karjalainen's exit. The complicated issues of Finnish politics have long since ceased to interest outside observers.

It is more to the point to try to discover why, after five years of relatively stable government and three years of remarkable economic stability, the will for compromise, the spirit of reasonableness has disappeared in the parties and the labour

weapons at hand, while the Social Democrats feel constrained. The Social Democratic Party has felt uneasy about being the sole representative of the left wing in office. Hence, it backs the seven-point demand of the Central Confederation of Finnish Trades Unions (SAK), which, if the Government accepts it, will make nonsense of the "fiscal package" implemented by the Karjalainen Government in June this year to correct the alarming payments

This is the confusion inherited by Mr. Aura. He has some important business to steer through a fractious parliament while waiting for a parliamentary Government to relieve him after new elections have been held on January 2-3, 1972. There are

MADRID, Nov. 2.

SPAIN'S troubled labour scene took a long step toward normalisation to-day with the return to work of more than 15,000 striking automobile and transport workers in Barcelona, moving within three hours. The workers returned to work at the end of a lockout which had been imposed on practically all of SEAT's 14,800 auto workers for illegal strike action.

This left only one major labour conflict, the strike of 12,000 coal miners in the Asturias region. They walked off their jobs a month ago to press their demands for higher wages and fringe benefits.

The resumption of work by Barcelona's auto workers and bus drivers ended two weeks of strike action which had threatened to disrupt traffic in Spain's second largest city and stopped production at SEAT, Spain's biggest industrial plant and number eight among European auto manufacturers. A source close to SEAT said the morning shift reported to work in full and got assembly lines

The workers struck two weeks ago to press their demands for the minimum wage for 25 employees who were fired for protesting against new night shift rules. The company called police to clear the plant of strikers on October 18, and production had been either disrupted or totally paralysed by the following day's lockouts ever since. An Auto worker, Sr. Antonio Ruiz Villalba, 33, shot in the stomach by a policeman on the first day of the strike, died in hospital on Monday. Labour sources said the strike was the last time a Spanish worker died in clashes with police in the past 18 months.

UPI

and the whole programme will be closely tied to Spain's requirements for steel.

Total Spanish steel output increased by 22.7 per cent. last year to 7.35m. tons. According to expansion programmes announced by the new existing steel plants, this figure is expected to about 10.5m. tons of steel per year by 1974-75, whereas consumption of crude steel, according to the Ministry of Industry forecast, will increase from 10.5m. tons in 1975 to 11.5m. tons in 1974, 12.6m. tons in 1976 and probably 17.18m. tons in 1980. This means that the production, from the projected plant at Sagunto could create a small surplus of steel in the country in the 1975-77 period and that demand for steel would be just balanced with local production in 1978-79. However, by 1980 the steel industry is expected to start a new expansion programme to meet the growing demand for steel.

BY REGINALD DALE, COMMON MARKET CORRESPONDENT

BRUSSELS Nov 2

THE SIX Common Market countries fell embarrassingly behind schedule in their attempt to draw up a common approach for negotiations with the EFTA countries that have not applied for membership.

A lengthy discussion of a draft negotiating mandate, the permanent representatives to-night decided there was as yet no point in holding a multilateral meeting for consultations.

so slow that there was no point in trying to arrange a multilateral session at all this week—although the candidates may well be informed unofficially of the state of play.

The trap is tiresome for all the countries concerned as the Six had been hoping to finalise the negotiating mandate at their Council of Ministers meeting here next Monday. The new candidates have also been hoping that the mandate

A multilateral meeting at the Ambassador level had been tentatively set for to-morrow evening, when representatives from three of the candidates (the U.K., Denmark and Norway) would in any case be in Brussels for entry negotiations. Earlier it had been thought that if the Six were still not ready by to-morrow, the multilateral meeting could be postponed to Thursday or Friday. To-night, however, the permanent representatives agreed that progress on the dossier had been

ANKARA Nov 2

TURKEY'S largest political party, the Conservative Justice Party, today gave its members a vote to support the "reform" government of Premier Nihat Erim. At a seven-hour meeting which broke up just before dawn, the party's executive Board decided to "postpone" a decision to withdraw the Justice Party ministers from the Erim Cabinet.

A party spokesman said a final decision would be taken on Saturday. But informed party sources said the executive Board decision was to revoke its previous decision to withdraw the party from the Erim government.

The millions of ministers on October 5 started a crisis

which produced a thinly veiled threat by Turkey's top commander that if a Justice Party government did not renew its support of the Erim Government, the Parliament would be abolished.

The Justice Party ruled Turkey until last March 13 when the military commanders threatened to take over directly the government. The chairman, Suleyman Demirel, did not step down as Premier and give way to a "strong and respected" new government which would end civil disorders and make reforms.

The party, which has 222 seats in the National Assembly, is led by Prof. Erim's Army-backed Government. AP

BONN. Nov. 2.

BRITISH defence Minister Lord Carrington will confer with West German counterpart Herr Helmut Schmidt during a one-day visit on Thursday, the Defence Ministry announced to-day. The Ministry said Lord Carrington's visit will be the latest in a series of bi-annual consultations between British and West German Ministers on questions connected with European defence and the Western Alliance.

At the same time, the Ministry announced Herr Schmidt will leave on November 21 on a fortnight-long tour of Thailand, Japan, Australia and New Zealand. The statement said the visit, underlining Bonn's "great interest" in the political development of Asia and the Pacific region, will include talks with leaders on bilateral and international questions and on defence topics. Herr Schmidt will explain West Germany's policy of detente with Eastern Europe as well as its attitude to East Germany. AP

By Our Own Command

GENEVA, Nov. 2.
TRADE UNION delegates representing workers in the nickel industry in 13 countries have taken the first steps toward the organisation of a concerted trade union response to the multinational corporations engaged in the nickel industry. They have requested the International Metalworkers' Federation to set up a permanent non-ferrous metal section within the steel department of the IMF for the exchange of information and the co-ordination of policies.

The 40 trade union delegates attending a special conference convened by the IMF served notice on the multi-national corporations that the trade union movements in the third world countries "will view most seriously any exploitation of their employees anywhere in the world."

The unions intend to develop collective bargaining co-operation to prevent the multi-nationals from achieving labour cost advantages at the expense of equitable wage and living standards throughout the industrial area. In a statement issued at the end of the meeting they stressed that this meant that wages and conditions should improve up to and beyond the level of the best which have been won by the best workers anywhere. But that higher standards should be depressed.

n Canada

The meeting had before it extensive research materials prepared by IMF and the United Steel Workers of America, the largest IMF affiliate in this country. The studies showed that, despite some temporary overproduction the future of the steel industry is one of continued growth and that the profitability of companies, although reduced from the peak of the high level of recent years, still represents a much better than average return on investment.

Two major strikes in the industry in 1969 and 1970 and a few Caledonia in 1971, were discussed in detail and it was agreed that there should be close collaboration in similar crises in

Representatives of the United Steelworkers in America were represented by the French Government authorities from entry into New Caledonia to provide technical assistance to the union there. The IMF was requested to take the necessary measures to ensure that such difficulties could be avoided in the future. A similar programme to tackle multi-national corporations was discussed in the international metalworkers' congress last week, with particular reference to the automobile industry.

By Robert Mauthner

PARIS, Nov. 2.

THE FRENCH Government has today introduced a Bill to the National Assembly proposing that French territorial waters should be extended to 12 nautical miles from their present limit of 3 miles. The official reason given for this step is that it will enable France to exercise greater control over the movement of giant oil tankers in France's coastal waters. Military security is stated to be another motive.

In cases where the distance between the French coast and foreign coasts is less than 24 nautical miles, French territorial waters could not extend beyond a median between the two, according to the terms of the Bill. The Government also stated that extension of territorial waters will not affect the rights of members of the Common Market parties or any other countries with which France has special agreements. The Government stated it will retain to fish within the present 3-mile fishing limits.

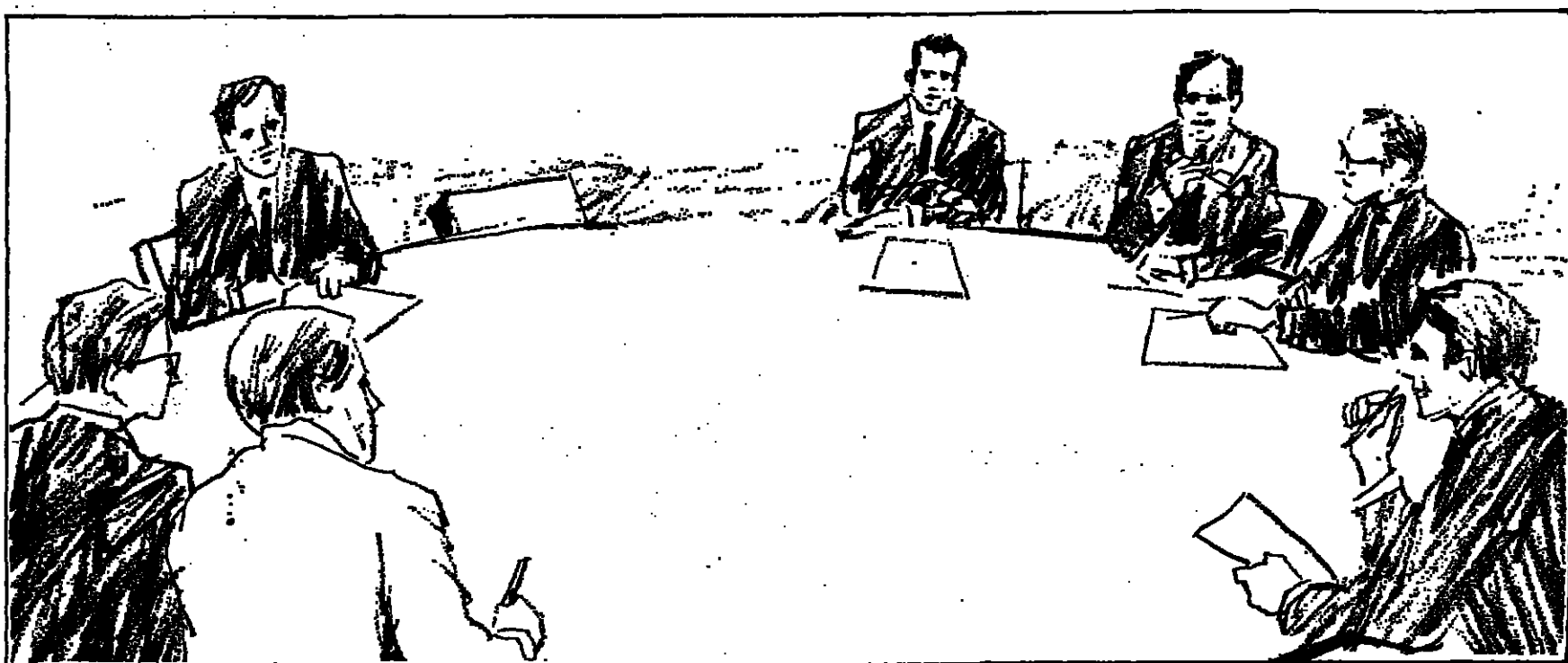
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NVO BIG atomic power stations, designed on the pressurized water reactor design evolved over a 20-year period of years by Westinghouse Electric Corporation of the U.S., are to be built immediately. The first two are being ordered by the French Intermediary company—Creusot-Loire—for a power plant at Bugey. The first two are rather two such plants.

All four will be of about the same size, the first two having a capacity of 2,000 kwatts each. The other two stations will be set up at the Bugey site close to Lyons and the Rhone.

Last year, Electricite de France ordered the first, definitive design to be built to a design other than that evolved by the Commissariat a l'Energie Atomique (CEA) a short very similar system. It is being called "Fessenheim" and, like the other two new stations, will be ordered by Creusot-Loire as the steam supply system designer and builder.

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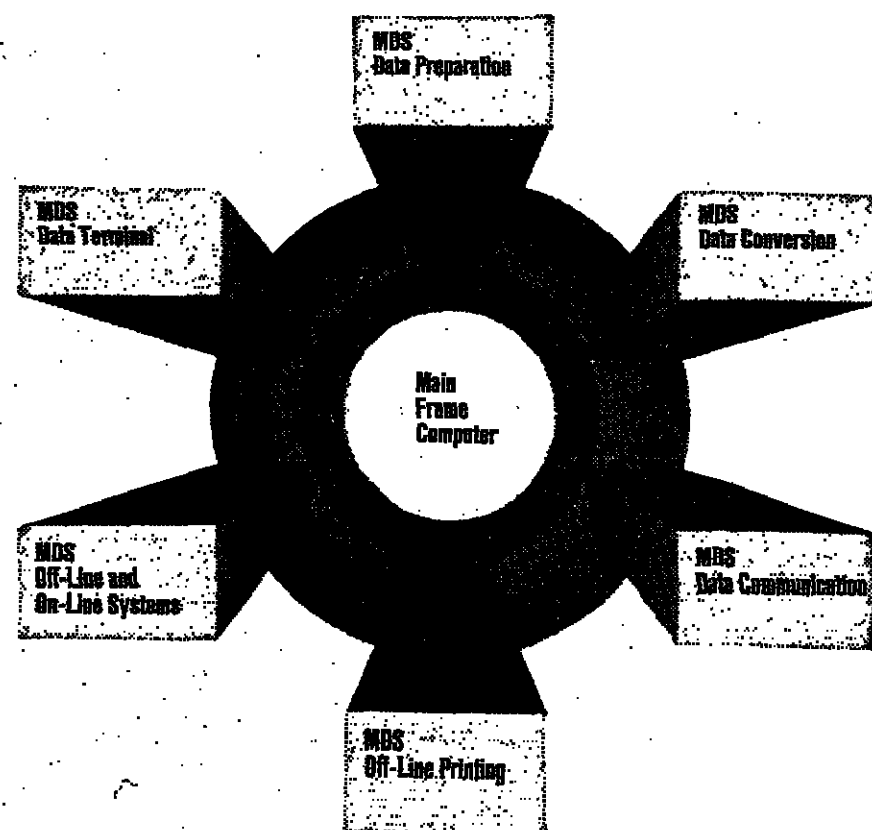


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Criminals must pay in cash, Lords told

DECLARING that "most of us here will not live to see the fruits of Britain's entry into Europe," Baroness Macleod said in the Lords: "But if any British Government thought only of the immediate future, then later generations would find in their history books that it lacked vision and courage." She was moving the address in reply to the Queen's Speech. Lady Macleod, widow of Mr. Iain Macleod and a magistrate for more than 16 years, then referred to crime saying: "In my view, a time must soon come when the prisoner must pay in hard cash for his crimes. This will need properly organised long hours of work instead of enforced idleness. The prisoner should do work for which he was paid the proper rate and all of it except a small sum should be taken away from him. His earnings should support his family and should also relieve the taxpayer of the £3m. a year now paid to victims of violent crime."

Spy incident

Lord Selkirk welcomed the reference in the speech to the Government's desire for good relations with Eastern Europe and mainland China, saying: "I believe that the recent spy incident improved, rather than damaged, the likelihood of better relations. It has established a baseline on which we can play." The speech referred to the growing significance of China, and although the idea posed problems, it had to be accepted that there could be only one China. "Australia is well placed for serving the markets of the South-East and Japan, and I hope that we may use our influence to make the Japanese realise that they would benefit themselves if they adopted a rather less near-sighted trading policy."

Opposition's view

The Opposition Leader in the Lords, Lord Shackleton, said this was a pleasant occasion "but it does not mask the fact that we are highly critical of the Government and its policies and of much of what is in the Queen's Speech." "We shall move an amendment to condemn the appalling unemployment figures now facing the country." Lord Shackleton also expressed his personal distaste for the proposed introduction of commercial radio. The Leader of the House, Earl Jellicoe, referred to proposals that the Lords should have select committees perhaps like those in the Commons. The first would be on sport and leisure. A growing number of people were rightly demanding improved facilities for their free time. There was a great deal in this area which needed to be looked at. "I will not go into details, but there is ample to keep us fully occupied during the coming session. For example, the Local Government Bill, which I know of it, is about the size of an early version of the Old Testament." The debate was adjourned until to-day.

Heath sees first signs of economic success

BY JUSTIN LONG, PARLIAMENTARY CORRESPONDENT

In the first clashes of the new Parliamentary session, Mr. Edward Heath yesterday confidently asserted to the Commons that the "next few months will give us an opportunity to strengthen the forces which are now moving towards stability."

Brushing aside warnings by Mr. Harold Wilson of day and night party battles over the Common Market legislation and Opposition condemnation of the Government's economic policies, Mr. Heath declared that the first signs of success for those policies were now visible.

With the Opposition plainly determined to make unemployment a crucial issue, the Prime Minister accepted with belligerence the challenges of the Opposition Leader on the

opening day of six days of debate on the Queen's Speech. Labour MPs, loudly proclaiming their disbelief, were told that the first indications were to be seen of a revival in industrial investment, of more moderate wage settlements, and of the upward trend in exports.

Warnings

Mr. Heath also gave further expression to the hints already dropped that the Government is now studying alternative ways of providing incentives to industries in the regions of high unemployment.

Tory cheers defied the warnings of Mr. Wilson that the Government was determined to put at risk its whole legislative programme for the sake of getting Britain into

the Common Market on "wholly damaging terms."

That programme would be at risk, Mr. Wilson emphasised, if the Government had any idea of streamlining the proposed Common Market Bill into simple enabling clauses.

Any such attempt at legislating "at a stroke" would be seen by the British people as a betrayal of hard-won constitutional rights — and it would reveal what Mr. Heath now knew, that he could not get through with the votes of Conservative MPs alone.

What were Mr. Heath's intentions for the Market Bill? Would there be one or more major Bills? On these points, the Prime Minister was not prepared to be explicit.

Despite the tighter security precautions, large crowds (above) saw the Queen arrive for the State opening of Parliament. On the right, the Yeomen move off on the traditional search for a modern Guy Fawkes — but photographers were not allowed in the vaults this time.



The Queen's Speech

THE QUEEN, in a speech opening the new session of Parliament, said yesterday: "My husband and I look forward to our visits to Thailand, Singapore, Malaysia, Brunei, Maldives and the Seychelles."

Labour had decided not to table an amendment to the Address on Northern Ireland, but would provide a day from their own time for a full day's debate on Northern Ireland. They would then expect a full report from Mr. Maude.

Turning to domestic legislation, Mr. Wilson said that after the Selsdon Conference Mr. Heath was invited to go to Farnham on the grounds that "law and order had become a major political issue," as Mr. Heath had made clear himself.

Mr. Wilson: "This year we have seen the consequences of this solicitude. They who turned law and order into a partisan issue have just published figures confirming a 13.4 per cent. increase in crimes of violence over the same period last year. "Of one thing I am certain. In two or three years from now, in whatever capacity the Lord Chancellor might then be serving, he will be devoting more time to juvenile delinquency."

Foreign affairs

"My Ministers will work for good relations with the Soviet Union and the countries of Eastern Europe, for peace in the Middle East, and for improved relations with the People's Republic of China. They will co-operate in the new arrangements concerning the defence of Malaysia and Singapore and will seek to promote stability in the Gulf. They will continue to work towards a solution of the problems of East Pakistan and the refugees and an end to the conflict in Indo-China, and a settlement of the Rhodesian problem in accordance with the Five Principles."

My Government intend to increase aid to the developing countries. They will continue to promote the development of the dependent territories and the well-being of their peoples.

"My Government will continue to co-operate with other Governments to resolve the current difficulties in international peace and bring about lasting improvements in the international monetary system in the interests of expanding world trade."

"My Ministers are determined that violence in Northern Ireland should be brought to an end. They are not less determined to continue their efforts to establish political conditions in Northern Ireland which ensure for the communities there an active, permanent and good role in the life and public affairs of the province."

"At home, my Government's first care will be to increase employment by strengthening the economy and promoting the sound growth of output. Their aim will be to curb inflation, to increase efficiency and to maintain a strong balance of payments. In developing their regional policies, they will pay close attention to the economic needs of particular areas."

Legislation will be brought before you to promote active competition and fair trading and to extend customers' protection in the sale of goods. Other measures will provide for extending the Shipbuilding Credit Scheme, for reorganising the structure of the gas industry, for assisting the exploration of oil mineral resources, and for encouraging British investment overseas through the establishment of an insurance scheme."

"My Ministers will pursue their proposals for reforming the tax system and will bring forward legislation to establish a value-added tax and to reform company taxation."

Pensions' reform

"My Ministers will continue to encourage the efficient expansion of agriculture and will introduce legislation to simplify administrative procedures and improve agricultural services. They will support the United Nations in preparing for a Conference on the Law of the Sea in 1973."

"A Code of Industrial Relations Practice will be presented for your approval and proposals will be made for developing training facilities to meet future manpower needs."

"Bills will be brought before you to reform the finance of local government and to provide more help for public and private tenants in need."

"Powers will be sought to

facilitate the reform of pensions schemes in the public services. "The substantial programme of replacement and improvement of primary school buildings will be continued. Steps will be taken to raise the school-leaving age to 16. Grants to direct grant schools will be increased. Provision for higher and further education will be improved and expanded. "Legislation will be introduced to give effect to my Government's proposals for the reorganisation of local government in England (outside Greater London) and in Wales."

"A Bill will be laid before you to reorganise the health services in Scotland. "My Government will pursue with vigour their policies for improving the environment. Legislation will be proposed to increase protection for ancient monuments and to extend the powers of local authorities to protect buildings in conservation areas."

"Legislation will be introduced to provide for an alternative service of local radio broadcasting."

Violent crime

"My Government acknowledge and share public concern at the growth of violent crime. They will lay before you provisions to strengthen the administration of criminal justice. In particular, provision will be made to enlarge the powers of the courts to award alternative penalties to custodial sentences and to require offenders to make reparation to their victims."

"Further measures of law reform will be brought forward and a Bill will be introduced to improve the facilities for giving legal advice and assistance to persons of moderate means."

Welcome for legal aid proposals

MR. WILLIAM CARTER, president of the Law Society, commenting last night on the Queen's Speech dealing with legal aid, said: "I enthusiastically welcome any proposals for improving the provision of legal aid and assistance for persons of moderate means."

"I hope that the announcement made in Her Majesty's speech will at least mean that, as has been advocated by the Law Society for the last three years, legal aid and assistance up to a certain financial amount will be made available to persons of moderate means with the minimum of formality."

"This reform is badly needed and much overdue."

U.S. coal strike hurting industry

By Nicholas Colchester

NEW YORK, Nov. 2. THE STRIKE of U.S. miners of soft coal strike now in its 33rd day is beginning to have an effect on U.S. industry. In addition the month-old strike in the East Coast docks is hampering the efforts of farmers in the southern states to ship a record crop of soy beans.

Companies dependent on coal had laid in good stocks before the miners pay dispute began, but are now finding that these stocks are running low. Some companies are reported to be paying abnormal prices for coal in order to keep themselves in operation. Monsanto Company said that its first and only chemical plant in Alabama was now facing "serious operating problems" for lack of fuel and the Indianapolis electric Utility Company said that its coal supplies were down from a normal 90 days reserve to the point where it envisaged operating difficulties in 30 days time, in spite of efforts to switch its load elsewhere.

There are no signs to-day of an end to the coal strike which started over a month ago when union and management failed to agree on a new wage contract. At the end of October the management was reported to have made its first tentative wage offer, but the negotiations are being carried out in secret and there have been no signs of acquiescence by the union.

The dock strike on the East Coast continues to drag on without any sign of settlement. So far no Government pressure has been brought to bear on the East Coast dockers.

From Mobile, Alabama, there are reports that the storage facilities are now crammed to capacity with 2m. bushels of soy beans. The strike has threatened with grave losses unless ships start to move the record crop soon.

Critical note by directors' wives

By Elinor Goodman

A CONFERENCE for directors' wives held to coincide with the Institute of Directors' annual meeting at the Albert Hall ended on a confused and critical note in London yesterday.

It had been set up for wives of members of the Institute and, although entitled *Trend for 1972*, it was in fact a promotional exercise sponsored by Brooke Bond in conjunction with its PR consultancy, Lexington International, and organised by National Magazine's Good Housekeeping Institute.

The aim was to get Brooke Bond products before an affluent feminine audience. Some 190 tickets had been sold at £5 a head, so that the operation was virtually self-liquidating. It was criticised for the triviality of the subject for discussion, such as cooking and beauty, when they felt the emphasis ought to be on the Common Market and the problems of Britain.

General light-heartedness was resented.

Double tax treatment of stocks feared

MR. HILARY ECCLES-WILLIAMS, president of the Association of British Chambers of Commerce, said at Brighton last night that he knew his members were worried about the treatment of stocks on which purchase tax has been paid when the change over to Value Added Tax is made.

"Quite apart from the injustice involved in what amounts to double taxation if no credit is given, there will be a serious distortion of trade unless there is a reasonably early announcement of the Government's intention to allow credit in respect of such stocks."

At meetings with the Customs and Excise, ABCC representatives have emphasised their concern over the problem for reasons both of justice and of expediency.

"We shall continue to press for a favourable decision in this and other matters, such as the proposed treatment of bad debts, of pure purchase and credit sales, and of certain business expenses, but we are pressing no opportunity to stress the importance of flexibility in the administration of the new tax," he added.

'Government turning its back on nostalgia'

MR. HEATH, who rose amid Conservative cheers, told the House that the Queen's Speech set out a programme of major measures.

"This is a programme which does not just react passively to developments: it is seeking to anticipate change and influence its course."

On Europe, he claimed that had Mr. Wilson been standing at the dispatch box as Prime Minister recommending the terms of entry to the EEC to the House, he would have recommended the consequential legislation "as a natural consequence of joining—including value-added tax."

"From now on, we shall be able to take a growing part in mapping the future course of Europe, and we shall do this with energy and imagination," said Mr. Heath.

"We are not going in with our eyes fixed nostalgically on the past, or to fight a series of rear-guard actions."

"We are going in to further Britain's interests in the community and to join with our partners in giving new impetus to the Community's spirit of co-operation."

Pressed by Mr. Wilson for more details of the Common Market legislation, Mr. Heath told him to "await the form of this legislation."

Ulster solution

He then told Mr. Douglas Jay (Lab., Battersea N.) that he could not say how many major or minor bills there would be. "When the time comes to present them, they will be presented to the House," he added.

On the subject of help to developing countries, Mr. Heath said that at a time when aid from elsewhere was being reduced,

Britain could be proud that she had reached the target of one per cent of her gross national product in aid to the third world. Mr. Heath said he would not get a political solution in Northern Ireland "so long as there are decent people being cowed and intimidated by gunmen who have no interest at all in a peaceful solution."

He said very many people in the Commons and on both sides of the border in Ireland had put emphasis on the need for a political solution. They had done this consistently and sincerely.

"But it is reasonable to ask those same people that they should make a contribution to that political solution by their own words and by their own deeds."

As long as they failed to do this, the effectiveness of their arguments was weakened. He said that, of course, the blowing-up of roads and searching of houses was disruptive to ordinary life and of course intermittent without trial was repugnant. But none of these measures would have to be continued if there was a reasonable willingness to sit round the table to talk.

He said: "A situation in which all the political concessions are being made from one side and not matched by any move from the other is profoundly unhealthy."

"It is unhealthy because so long as there is no genuine dialogue, there is a risk of a tragic decline towards increasing strife and civil war."

On economic affairs, Mr. Heath said that whatever policy was followed by any Government, it had to be operated and conducted against the background of the international monetary

system and trade arrangements. "It is here I believe that action most urgently is required." The Government had put forward proposals to help towards a solution of the present problems.

It was wrong in principle that the supply of international liquidity should be determined largely on the basis of one country's balance of payments deficit. The aim of Mr. Barber's proposals was that Special Drawing Rights would replace the dollar as the main reserve asset. "It is absolutely essential we should now stem the protectionist tide which is beginning to flow." On the domestic economy, he said there were signs of improvement. The next few months will give us the opportunity of strengthening the forces which are now moving for stability."

Output forecasts

The Government proposed to radically re-examine the monopolies, mergers and restrictive practices and the institutions which administered them.

The Government wanted a "greater independence, openness and consistency in the initiation of inquiries and the ending of discrimination between private and public enterprise and between manufacturing and service industries."

The legislation should be framed so that it would promote competition and safeguard the consumer's interests. He said the Chancellor had forecast that output would grow by between 4 per cent and 4.5 per cent between the first half of 1971 and the first half of 1972. The Government's information confirmed this forecast.

The volume of consumer expenditure was up and as far as private industrial investment was

concerned, the first signs of economic foundation and would last, said Mr. Heath. This was particularly true of Scotland, Wales and the North East.

He said that if the level of wage increases and cost inflation continued to fall and if demand, as all the indications were now, was beginning to rise, we could expect the reversal of the unemployment trend which the Government desired. But we would still have the very difficult problem of the regions.

The core of the unemployment problem lies here as it has done for more than 50 years. From the beginning of the '30s successive Governments have been developing more and more sophisticated instruments for dealing with this problem."

But the Government had succeeded in solving this problem. "The regional measures we are using to-day are not the complete answer but we are now studying alternative options which may be open to us."

The general view in the regions was that unless there was a completely fresh and radical approach to the environment and the quality of life in these areas, the industrial revival by fresh industry going there would not materialise.

It is no use expecting the new industries of the 70s to flourish against a background which, in many cases, is still too reminiscent of the 19th century."

Mr. Heath said it was because of this general approach to the environment that the Government had made available £160m. on infrastructure in the development and intermediate areas.

"This was also why they were stimulating a vigorous assault on pollution and derelict land, and why they were increasing their support for the arts and crafts."

THE BROCKS GROUP

Highlights from the circulated statement of the Chairman, Mr. B. R. Clack

- * In a challenging year for the Group, profits before tax have risen from £305,274 to £253,027.
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- * The whole of the company's production is now centred at Poole with a greater degree of profitability. Our development programme is already beginning to show results and we have in production several new items.
- * One of these products, the "Seascan" radar, specifically designed for pleasure craft and small commercial boats, sells at £450 which is just over half the price of that of our nearest competitors. Seascan has been granted F.C.C. Type Approval in the U.S.A. at the first attempt.
- * The Group are not just Burglar Alarm Specialists but an electronics orientated group with interests in leisure and security markets. However, this by no means implies any slowing down in the burglar alarm business and we are budgeting for further increases in turnover and profit this year.
- * I look with confidence to further substantial growth.

U.S. strike hurting other overseas industries

By Nicholas...

East Pakistan by-elections in dispute

BY OUR OWN CORRESPONDENT KARACHI, Nov. 2

THE FEELING is growing in some political quarters here that the "punch" of by-elections in East Pakistan can contribute to the deteriorating situation in the country. They feel that nothing short of the summoning of the National Assembly immediately with its full powers can relieve the position. "There is simply no other way of convincing ourselves or the rest of the world that we really mean business, that we have not yet gone completely insane, and that we are not suffering from incurable outside manipulation."

One observer said: "The by-elections are being held next month in East Pakistan for seats won by Awami Leaguers who have been disqualified. Other Awami League members of the National Assembly have been allowed to keep their seats although their party has been officially outlawed."

But the way things are going there may well be no by-elections at all. They were scheduled for seats, but already 22 people, mostly members of Rightist political parties such as the Jamiat-ul-Islami, have been declared elected unopposed because they were the only candidates. It looks as though the seats could be filled without contest.

A surprising element has been the success achieved by Mr. Z. A. Bhutto's People's Party. Against expectations it has already picked up five seats unopposed, established a party office in Dhaka, and expects to get at least 100 seats in the 200-member National Assembly. But if the People's Party does manage this it will gain a national look with about 100 seats altogether and a majority in the 313 seat National Assembly. But

Ghana debt talks next week

By Nicholas...

BRIDGE, Bloom. A Correspondent. GHANA is to ask Britain for a rescheduling of its foreign debt next week, when Dr. Kwame Nkrumah is expected to dine at 10 Downing Street.

It will be the second time in the last few months, but the time in almost as many years that Ghana has met its creditor for debt rescheduling. The two Prime Ministers are expected to outline a strategy for a major debt re-arrangement conference which will have other Western countries as well. It will probably take place in London in the New Year.

There are two problems in two-fold. The first is the total medium-term debts of Ghana, which are now estimated at some £120m. These have been rescheduled three times in the last five years. The second is the problem of the interest on these debts, which is now estimated at some £20m. These have been rescheduled three times in the last five years.

Critical by direct wives

By Elinor...

A CONFERENCE about term debts, which is known to be in progress at the moment, is being held in London. It is these totals which will be the subject of the next Conference must tackle. However, the second problem, which is known to be in progress at the moment, is being held in London. It is these totals which will be the subject of the next Conference must tackle. However, the second problem, which is known to be in progress at the moment, is being held in London. It is these totals which will be the subject of the next Conference must tackle.

Double treatment stocks for

By Elinor...

MR. HILARY EMMETT, a former member of the House of Commons, is scheduled to arrive in London next week. He is a former member of the House of Commons, and is scheduled to arrive in London next week. He is a former member of the House of Commons, and is scheduled to arrive in London next week.

ASSAN ACTS CORRUPTION

By Elinor...

RABAT, Nov. 2. Hassan has honoured his promises to combat corruption at the highest levels by ordering the arrest of several cabinet ministers and several lesser officials in the last few days. It is generally understood that the arrests are connected with the sale of minerals to foreign companies. Hassan has honoured his promises to combat corruption at the highest levels by ordering the arrest of several cabinet ministers and several lesser officials in the last few days.

Egypt to get aluminium plant from Soviet Union

BY OUR OWN CORRESPONDENT CAIRO, Nov. 2

THE SOVIET UNION is to supply Egypt with a \$50m. aluminium plant with a projected output of 100,000 tons a year. The plant, to be erected at Nag Hammadi some 300 miles south of Cairo in the Nile valley, will use a 2,000m. kilowatt hours or a quarter of the Aswan high dam power output a year.

The project was originally agreed on in July 1969, but the go-ahead came yesterday with the signing of a protocol by Industrialisation Authority Chairman Taher Amin and the Soviet Economic Counsellor Vassili Dimitrenko.

Building of the aluminium plant, scheduled for completion in 1974, will be co-ordinated with the expansion of the Red Sea port of Safage and the construction of a new Nile port near Nag Hammadi, capable of dealing with 300,000 tons annually.

Egypt's domestic consumption of aluminium has been estimated at 25,000 tons, for which she is paying about \$8m. a year.

At full production, the projected plant would provide some 75,000 tons aluminium for export, bringing estimated earnings of \$15m. in foreign exchange.

The Economy, Finance and Planning Ministers of the three-state Federation of Arab Republics currently meeting in Tripoli have agreed on a \$1.5m. budget for confederal institutions divided equally among the three partners. They have also agreed

Delay for textile pact

BY OUR OWN CORRESPONDENT HONG KONG, Nov. 2

HONG KONG still has not ratified the agreement limiting its exports of man-made fibres and wool to the U.S. signed in Washington nearly a month ago. At the Executive Council meeting today the agreement was discussed for the third consecutive week but no decision was taken on its ratification.

Until the pact is formalised and its details made generally known, manufacturers here will not be able to assess the economic implications. It is between each, the less opportunity that the agreement provides for a quota of 200m. square yards of man-made fabrics and 40m. square yards of wool with a 74 per cent. annual growth rate for the former and a 1 per cent. annual growth rate for the latter. These quotas have been based on exports to the U.S. for the year ending last March.

What is important for manufacturers to know is the categories into which overall quotas have been shredded. The known manufacturers here will not be able to assess the economic implications. It is between each, the less opportunity that the agreement provides for a quota of 200m. square yards of man-made fabrics and 40m. square yards of wool with a 74 per cent. annual growth rate for the former and a 1 per cent. annual growth rate for the latter.

Star East defence arrangements

HARVEY STOCKWIN SINGAPORE, Nov. 2

RISH last minute diplomatic activity has resulted in all the defence arrangements initiated yesterday in both Singapore and Malaysia to co-ordinate the military commencement of those arrangements. The Anglo-Malaysian agreement, signed last night, and the previous agreement, signed in Singapore, are being put into effect at the same time. While undesired, a legal agreement, but by dint of several light negotiating sessions, and small concessions, over half the price of much cable consultations has been achieved. It was the first time that the Anglo-Malaysian agreement, signed last night, and the previous agreement, signed in Singapore, are being put into effect at the same time.

EGYPTIAN OIL

Major strikes remain elusive

BY WILLIAM DULFORCE, CAIRO CORRESPONDENT

THE HISTORY of Egyptian oil exploration has been one of jubilation followed by a gradually dawning disappointment. Substantial finds have been made—the Sinal field now in Israeli hands and the Morgan field in the Red Sea—but they have never been sufficient to push Egypt into the oil exporters league. Egyptian oilmen retain, however, a firm conviction that there are large oil reserves within Egypt's borders, most probably in the Western Desert. As Mr. Ali Wali, the energetic Minister of State for Petroleum Affairs, said in a recent interview, "I am sure the oil is there and we shall go on working hard until we strike something really big."

Gas pipelines

But the first big success may come with gas rather than oil. The announcement last June that Amoco's new discovery in the Western Desert would be brought into production was a strong morale booster. Subsequent drilling, while it has not yet confirmed the promise of a major oil find, has indicated gas reserves in the Abu Gharadig structure which might provide export possibilities. After drilling two dry wells in the concession area Amoco (a subsidiary of Standard Oil) found two oil-bearing and three gas-bearing zones in Well No. 3.

Testing results announced in June gave 7,600 barrels a day from the oil zones and 49m. cubic feet of gas a day. The building of a crude pipeline linking with the el Alamein field was being considered and studies were started on a gas pipeline to Cairo

and Helwan industrial centre just to the south of the capital. It was estimated that each of the two major gas zones could produce 50m. cubic feet a day.

The fourth well, drilled 1.9 miles away in the direction of the first two dry wells, produced no oil, but gas was found at the same horizons as the third discovery well. An open flow test gave 25-30m. cubic feet a day. Two new wells are now being drilled in the other direction from the discovery well and GUPCO (the Egyptian Petroleum Corporation's 50:50 partnership with Amoco) confidently expects to hit oil sands somewhere between 9,000 and 9,500 feet. So far GUPCO estimates that Abu Gharadig has 55m. barrels recoverable with the 1,000m. barrels reserves in the Red Sea's Morgan field but a second strike would immediately double the estimate.

Morgan field

Egypt desperately needs a major discovery. Current production at just over 300,000 b/d is lagging and is considerably lower than the forecast of 450,000 b/d for 1971. Output from the Morgan field in the Red Sea has dropped from a peak of around 300,000 b/d last autumn to around 240,000 b/d. Amoco has had its troubles at Morgan, but the main cause of the decline in output seems to be over-production. Desalination facilities were installed last May but target which was intended to equal local consumption.

Problems since and GUPCO is now studying the possibility of water injection to keep up the pressure. Engineers forecast that production may have to be levelled off at around 200,000 b/d. The Morgan field has been exploited very quickly with over 300m. barrels or one-third of the reserves taken out since 1967.

Production from the Alamein field is being maintained at just under 25,000 b/d while the rest of the 300,000 b/d total production comes from the small fields along the Red Sea coast. Here the Japanese Egyptian Petroleum Development Company has been delayed chiefly through differences between Phillips, the concession holders, and EGPC. EGPC has now gone ahead with the negotiation of a \$10.1m. contract for the development of a field with a partnership formed by International Management and Engineering Group (IMEG) and Union Industrielle et d'Entreprise (UIE).

Offshore

IMEG is to undertake the detailed design of all plant and to manage the construction of the onshore pipeline and distribution facilities, while UIE will do the offshore platform, the sealines and the terminal plant. There will be French credit backing and financing. Only two holes have been drilled at Abu Qir but EGPC calculates that it is sure of 100m. cubic feet a day for ten years. The gas will be used to feed three power stations in Alexandria, two existing and running on gas oil and the third projected. It will also fuel two paper factories and a copper factory which is being extended.

EGPC anticipates a substantial saving on fuel oil imports once the project is completed, which should be two years after the start of work. Part of the fuel oil for the existing power stations and factories, however, comes from the Alamein and Morgan crudes and under discussion is the possibility of the contractors setting a payback from the fuel oil available once the project is completed. Thus, it is possible that part of the sale of fuel oil by IMEG-UIE on a no profit, no loss basis.

"I had a painful experience in a hotel last week"



Nothing pricks the bubble of the hotel-guest's fragile content so fast as water that suddenly runs cold. Or as room heating that was apparently planned with Eskimos in mind. So if the warmth of your rooms and water depend upon an ancient boiler, or upon the whims of an ancient boiler-man, you might well see trade improve with a change of fuel.

Contrary to popular belief, gas is a very good buy. When you take all the costs into consideration, it's often a better buy than any other fuel. Gas can operate completely automatically and with no supervision. It requires no storage, and little maintenance. When there is less to go wrong, less goes wrong. It will spare you the nuisance of deliveries, and the irritation of paying for your fuel before you've used it. Changeover costs can be very moderate. If finance is a problem, we may be able to help arrange credit for equipment and fitting. And gas will give you the added glow of using a completely clean fuel.

Ask your local gas board's Commercial Sales Manager for a free copy of a booklet we have produced called 'Gas will make your business more efficient'. Or send the coupon for your copy. It tells a most interesting story. And a true one.

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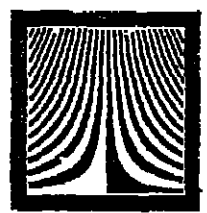
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The Technical Page

EDITED BY ARTHUR BENNETT AND TED SCHOETERS

ELECTRONICS

A bright spot in radar

PRODUCTION of radar equipment showed the most marked gains in the first half of the current year according to the latest figures on domestic performance made available through the statistical section of the Department of Trade and Industry. Nucleonic instruments and control equipment for industry were the runners up, though of course the former sector accounts for a far smaller turnover than either of the other two.

For the first half of the year, total output of electronic capital equipment rose to £336.6m, from £320.7m, a year earlier, an advance of about 5 per cent. over the period. Computers, by far the largest section in the group, were ominously only 1 per cent. up at £28.1m, worth of equipment for the home and export markets, while radar was 38 per cent. up at £38.2m, and control equipment 22 per cent. up at £43.7m.

Total export deliveries for the first six months dropped back to £112m, from £117m, and the second quarter total was the lowest since the fourth quarter of 1969.

Export orders on hand at the end of the period were down from the mid-1970 all-time peak

by ten per cent. but home orders were still more heavily outweighed those of punched card computers. They totalled £10m, compared with £2m, for arrivals of punched card machines. Exports of non-punched card computers were £9.8m, but those of punched card computers were £16.4m. The January/September figures were about in line with what could have been extrapolated from the earlier returns. They indicate that by the end of the year, arrivals of peripherals and computer parts could be as much as £75m, and more, unchanged from the previous year in spite of worse trading conditions.

Sales gloom

The detailed figures for the most important slice of the market, occupied by the computer industry, indicate that the industry could well finish the year £20m, down on output compared with the £20.9m, performance put up in 1970. This is very much in line with rather gloomy unofficial predictions which can be heard among manufacturers' staff that they have been experiencing a 15 per cent. and worse sales drop and that turnovers this year, even bolstered by products other than computer hardware, may show a fairly substantial decline from 1970 totals.

Export-import business figures are available in respect of computers for the first three quarters. They show a continued heavy imbalance on the import side with the total for the nine months reaching £105m, against exports of £64m. As in previous months, imports of computers operating

with disc or tape systems heavily outweighed those of punched card computers. They totalled £10m, compared with £2m, for arrivals of punched card machines. Exports of non-punched card computers were £9.8m, but those of punched card computers were £16.4m. The January/September figures were about in line with what could have been extrapolated from the earlier returns. They indicate that by the end of the year, arrivals of peripherals and computer parts could be as much as £75m, and more, unchanged from the previous year in spite of worse trading conditions.

Buffer memories

DESIGNED for use in data communications, data logging, automatic control systems, medical electronics and in instrumentation, a range of buffer memory systems has just been put on the market by Enquiry Systems of Kilm Rade, Wokingham, Berkshire.

The units are DTL/TTL compatible and there are four models

available ranging from 2048 bits storage capacity. Models can be paralleled in 4096 bit modules.

Facilities offered by the memories include simultaneous read/write, serial parallel conversion, synchronous or asynchronous operation and automatic addressing.

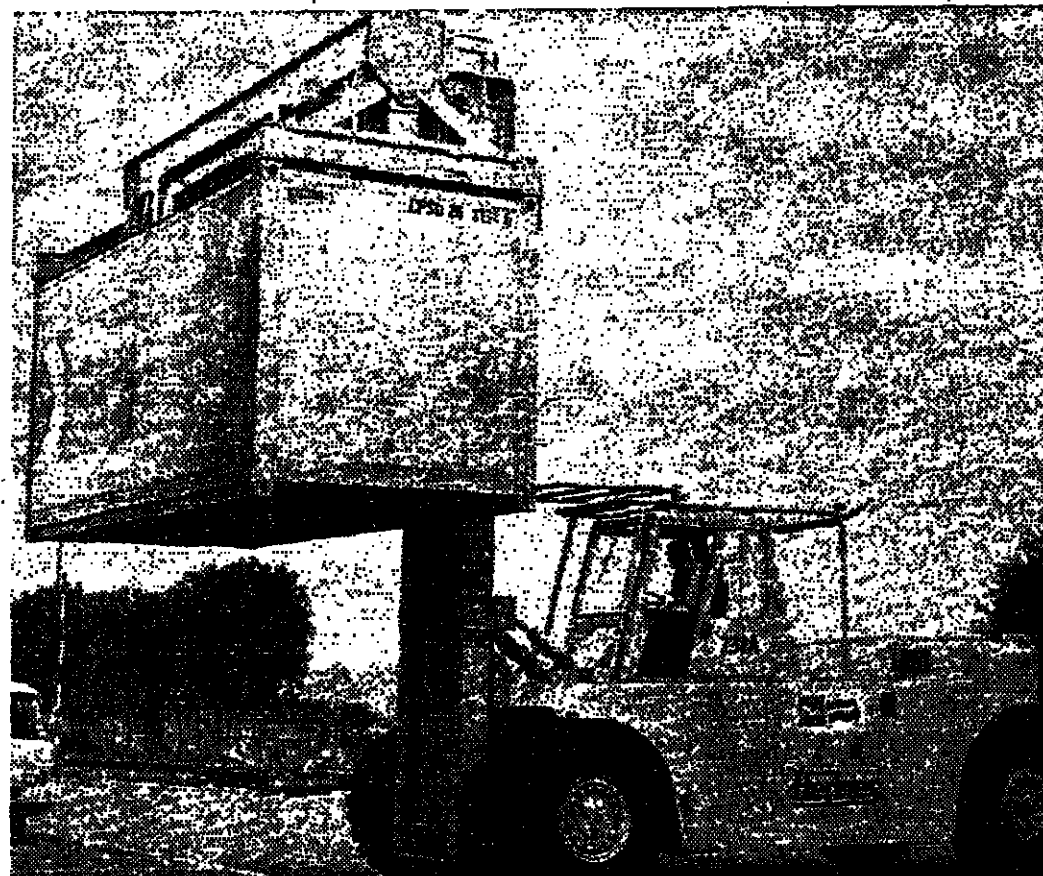
Medium scale integration is employed in the circuits together with metal oxide-silicon techniques and tri-state logic.

Five amp rectifier

A RECTIFIER module delivering up to 5A is available from ITT Components Group Europe, Edinburgh Way, Harlow, Essex.

Each unit contains a series chain of five silicon avalanche diodes, individually shunted by voltage equalising capacitors and mounted on a high-alumina ceramic heat sink. The modules are rated at 5 kV overall, with additional means of HF bypass for both transient handling and voltage sharing conditions.

The minimum forward to reverse current ratio at the full rated output is 20,000 to one and the peak input voltage is 4 kV. The forward voltage is 6.0 V maximum and ambient temperature operating range is minus 10 deg. C to 65 deg. C.



A new top lift unit, specifically designed for container handling, at work at Tilbury for the Port of London Authority. Other units are in service in Belgium and Denmark. The latest forklift truck attachment in the range produced and marketed by Motor Rail, of Bedford, the Tilbury unit is mounted on a Henley Hermes 68HC truck. Designed by Mechanisation Products, of Hitchin (Herts), it can be mounted on to a front-load or side-load truck, and one-man operation is achieved by using optional features.

A modular system provides for a speedy interchange of 20-foot, 30-foot or 40-foot main beams and the attachment can handle

laden containers up to 25 tons. Design features include articulating end beams and fully floating twistlocks with fail safe interlock, ensuring that badly distorted containers can be picked up safely from uneven ground. None of the twistlocks will operate unless the attachment is nested on to the container correctly for stacking or pick up. Hydraulic movements include side shift and slew, and, in the case of side-loader application, outreach can be fitted to enable containers to be unloaded easily from railway wagons. In its basic form the unit costs £2,452.

PETER CARTWRIGHT

SAFETY

Improved traffic lighting

TRAFFIC LIGHTS with built-in signals to make them visible and incorporating automatic dimming device to intensity at night and cut on glare, will be appearing on Britain's roads in future. British Standards Institution the new signals are specified in British Standard BS505: "Road Traffic Signals" has been revised for the time since 1939.

The revision deals with the portable electric signals, operated from a generator or battery supply the first time, requirements have been included for, and operated signals and also alternately flashing red used as a "stop" instrument level crossings, aircraft on and swing bridges.

The BSI committee which up the revision, in representatives from the Research Laboratory, the Association of Chief Police Officers, many other professional manufacturers' associations.

An important reason for the revision, BSI stemmed from research by the Road Research Laboratory which showed that optical requirements were not met by modern traffic lights. These have been implemented specification of tungsten lamps with a much higher output than the earlier filament type. Together with light transmission, this rate light output by a factor of ten times. In addition, the normal power used on high speed roads to reduce the chance of glare during the night, automatic device can which reduces the intensity factor of eight to ten times. It is expected that would not be used in conjunction with strong competing sources, such as city centre.

The signal head provides a matt black surface with a surround which acts as an effective background for three lamps and separate from the modern traffic lights might confuse the motorist.

The MB is keeping his secret

He's given her an Adler Electric Typewriter. Effortlessly accurate. Completely reliable. Producing crisp letters every time (and in much less time!) She's delighted. And so was he when he asked about the price and leasing terms. Full details, by signing this ad and returning it to us pinned to your letterhead.

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AGRICULTURE

Crawlers from Fiat

SHOWN for the first time in the U.K. at the Royal Smithfield Show are two crawlers from Fiat Tractors, 35 Berkeley Square, London W1X 6EE.

The 100C is powered by a six-cylinder 7412 cc direct injection diesel. Electrical equipment includes a three phase, self-rectifying 24V 32 A alternator and two high capacity batteries in series (used for starting). A dual plate, oil bath, oil cooled engine clutch transmits power to a 5 forward, 1 reverse speed gearbox.

Steering clutches are of the dry multiple-disc type, hydraulically boosted and controlled by hand levers. Each clutch assembly, comprising 11 driven plates with sintered metal facings, is removable as a unit. The self-energising, contracting band brakes are pedal controlled, and each can be removed independently of the corresponding clutch pack.

Double reduction final drive is employed to reduce load and stress on the power train. The box section track frame is built from rolled C-beams. There are six track rollers (of manganese steel) and two carrier rollers on each side. Rollers and idlers are life-time lubricated and protected with metal-to-metal floating seals. Hydraulic track adjusters are standard equipment.

Maximum drawbar pull is 20,537 lbs, track area in contact with the ground is 2,980 sq. in. and ground pressure is 5.18 psi with a total operating weight of 15,400 lbs. Maximum forward speed is 5.51 mph.

The 80C is powered by a four-cylinder 5401 cc diesel. A dry clutch transmits power, while the rest of the

transmission, etc., is similar to the 100C. Maximum drawbar pull is 17,490 lbs (track slip is the limiting factor); track area in contact with the ground is 2,512 sq. in. with standard 17.7 in. shoes and 3,350 sq. in. with optional 23.6 in. shoes, while ground pressure is 5.5 and 4.9 psi respectively. Total operating weight is 13,850 lbs, and maximum forward speed is 5.0 mph.

A 3 point linkage is offered as optional equipment on both models. This has been designed in the U.K. to meet the particular requirements of the British market. The operator has finger tip control (using only three levers) of heavy fully mounted implements. The system will accommodate all 3 point linkage and pto equipment. The combination of fully floating main lift rams and 30 degree lateral slewing means that erratic movements will be absorbed by the system without affecting the work.

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PRODUCTS

Improved mains plug

THERE are two features of many types of existing mains plugs that are potential safety hazards—it is possible to thrust thin metallic objects between the back of the plug and the face of the socket, making contact with one of the live pins, and it is frequently not difficult to pull the whole cord out of the plug.

MR Electric of Shubbery Road, Edmonton, London, N9 0PE, has this week introduced a new design of plug that overcomes these problems and offers one or two other advantages as well.

Called the MK Safety Plug, it has live pins that are clad with insulating over half the protruding length, so that if the plug is half pulled from the socket only the insulation is exposed.

The automatic cord grip se-

curely locks the wire into position so that it cannot be accidentally pulled from the plug. It also effectively prevents inquisitive young fingers from pushing all but the thinnest of probes through the hole at the base of the plug. An added precaution is the re-positioning of the live terminal which puts it completely out of reach of any object which manages to slip through the cord grip.

There are no screws in the cord clamp which is a press-in nylon device providing a self locking action for any size of cable.

The plug is also rather easier to wire than many existing types in that each of the three wires in the cable is cut to the same length and is connected to the terminals by a combined nut and washer. The plug pins are fixed so that they cannot fall out and the cover locking screw is also captive so that it cannot work loose or get lost.

Embosses plastic cards

DESIGNED for organisations that need to emboss about 5,000 plastic cards per year, the Compact Cardwriter just introduced by Elliott Business Machines of Boreham, Essex, can produce letters, numbers, punctuation and OCR fonts and has backspace ability.

The company claims that its portability—it occupies less than a cubic foot—allows embossing at any point or stage of data capture and there is therefore no need to channel data to a central embossing station.

Spoilage is minimised by facilities for simple erasure and re-identification. Quick and simple card loading, line adjustment and spacing, and formatting capabilities, allow consistent outputs, says the company, of up to 100 cards per hour.

Pumps for "difficult" liquids

HIGH-capacity diaphragm pumps, designed for the transfer or proportioning of corrosive, viscous, shear sensitive, toxic, or valuable process chemicals and slurries, are available from Rowen and Co., York House, Empire Way, Wembley, Middx., HA9 0PF. The range comprises 19 pumps of fixed and variable stroke construction, each available with one of three different stroke rates. Capacities are up to 300 g.p.m. in 11 stepped ratings, with pressures ranging up to 400 p.s.i. in three sizes of mechanism.

Various constructions are available to meet all chemical process requirements, as the liquid heads can be in virtually all machinable alloys and plastics. Pumping temperatures up to 400 degrees F can be handled.

The pumps are electrically powered, and can be supplied with or without drive. They can be fully instrumented to give automatic regulation of motor speed and stroke length modulation.

Design is such that isolation of the pumped liquid is achieved, even in the event of diaphragm failure. Should the working diaphragm fail, a guard diaphragm protects against cross contamination while the pumped liquid is relieved to waste or to an alarm system mechanism through a tapped bleed hole.

The pumps are stated to give an accuracy of ± 0.5 per cent. over 95 per cent. of the range, with a reproducible stroke length to ± 0.3 per cent.

METALWORKING

Routing of aluminium and plastics

FREE-STANDING copy routing machines, designed to form slots and recesses in aluminium and plastics and mild steel extrusions of unlimited length, are available from Trend Industrial Equipment, Lechmere Road, London, N.W.2.

The workpiece is held on the machine by pneumatic clamps, which has only two basic hand lever controls. One activates the motor, clamps and coolant spray system simultaneously and, by varying movement of the lever forwards or sideways, determines the direction of travel of the motor head. With the other the cutter is brought down to or disengaged from the workpiece.

A range of collets has been designed for the machine, increasing its versatility by the use of spiral milling cutters, operating at 12,000 r.p.m. and capable of routing slots up to 4 inches wide by 10 inches long.

A pre-cut 14-gauge metal template, can be inserted into a frame and used as a "master" from which identically shaped slots and recesses are cut. A guide pin follows the template, the diameter of the pin being the same as the cutter.

Fitted with a continuously-rated 1 h.p. motor, the machine can be supplied for three-phase or single-phase 220/240 volts a.c./d.c.

Leaflets on zinc alloys

FIRST in a series of leaflets intended for designers and engineers has been published by the Zinc Alloy Die Casters Association.

"Finishes for Zinc Alloy Die Castings" describes the main kinds of applied finish suitable for zinc die castings: electroplating, vacuum metallising, painting, clear lacquering, plastic coating, anodising and combinations of paints and electrodeposits. Advice is given on the performance of the finishes, design requirements to be observed and

A Dutch forklift multigrab

A DUTCH company specialising in the development of grabs for drums is making a multi-grab for works where the drums are filled horizontally. The multi-grab is mounted against the apron of a fork lift truck, and can carry from one to six drums.

A steel framework contains between one and six grabs which can be opened mechanically and closed by means of an electromagnetic relay. In the centre of each grab there is a guide arm which moves vertically and is linked to the grab jaws by means of pulleys and springs. To lift the drums the multi-grab is moved downwards.

As the guide arms make contact with the drum surfaces, the grabs open and the jaws slide round the rims of the drums. The grabs close, and the drums can be lifted and moved as required. When the drums are lowered the multi-grab moves upwards until the guide arms again come into contact with the drums and the grabs open.

The grabs are designed so that if there is a power failure drums in the jaws are not released. The electromagnetic relays can be connected up to a 12V battery in the fork lift truck. The power input of the relay is very low.

Each grab can transport a maximum load of 1,000 kg, and drums with volumes ranging from 60 to 1,000 litres. The grabs are made by Arvos NV, Linker Rottakade 107, Rotterdam.

on preparatory treatments, including vibratory polishing before plating.

"Machining Zinc Alloy Die Castings" summarises the recommended techniques for carrying out machining operations. Zinc alloy die castings can often be cast with close enough tolerances to need no machining, but cases arise where it is necessary or more economical to achieve final dimensions, or shapes by this means. The processes include drilling, tapping, threading, reaming, spot facing, turning and boring, milling, broaching, shaving, planing and burnishing. Tool design and settings and working speeds are recommended in each case.

Both information sheets are free from ZDCA, 34 Berkeley Square, London W1X 6AJ.

Measures noise damage

B AND K Laboratories has a new instrument for noise measurement expected to play a leading role in future evaluations of noise risk to health, assessment of hearing loss, and psycho-acoustic research generally.

Type 4433 noise dose meter can be used with any sound level meter and provides digital indicators of elapsed time, overload duration and noise dose count. A special slide-rule is supplied for converting the measuring time and noise dose count into a figure representing the equivalent continuous noise level in terms of dBA. Frequency range is from 20 Hz to 20 kHz and input range is 40 dB. The digital clock used for time measurement has a resolution of 0.001 hour and measuring time is selectable from seconds to days. Clock accuracy is better than 1 per cent.

The overload duration indicator has a resolution of 0.0001 hour and there is a choice of four time constants.

The Financial Times Lyons Bakery Associated Hotels Lesney Industries and Lloyd Forwarding

all use Copycat

Lloyd Forwarding is a small shipping and forwarding company in the City. But like the big outfits they chose Copycat desk-top copiers because they liked the idea of getting a machine that gave them all the benefits of electrostatic copying without taking up floor space or being expensive to operate. So they're doubly pleased with Copycat.

The model they selected from the Copycat range not only matched their modest copying needs to a "T", it cost less than a packet of cigarettes a day

to lease and it was inexpensive enough to buy outright, if they'd wanted. They like the speed and convenience and get clear, crisp copies every time without fuss and bother.

Once again, Copycat have exploded the myth that small businesses can't afford to go electrostatic.

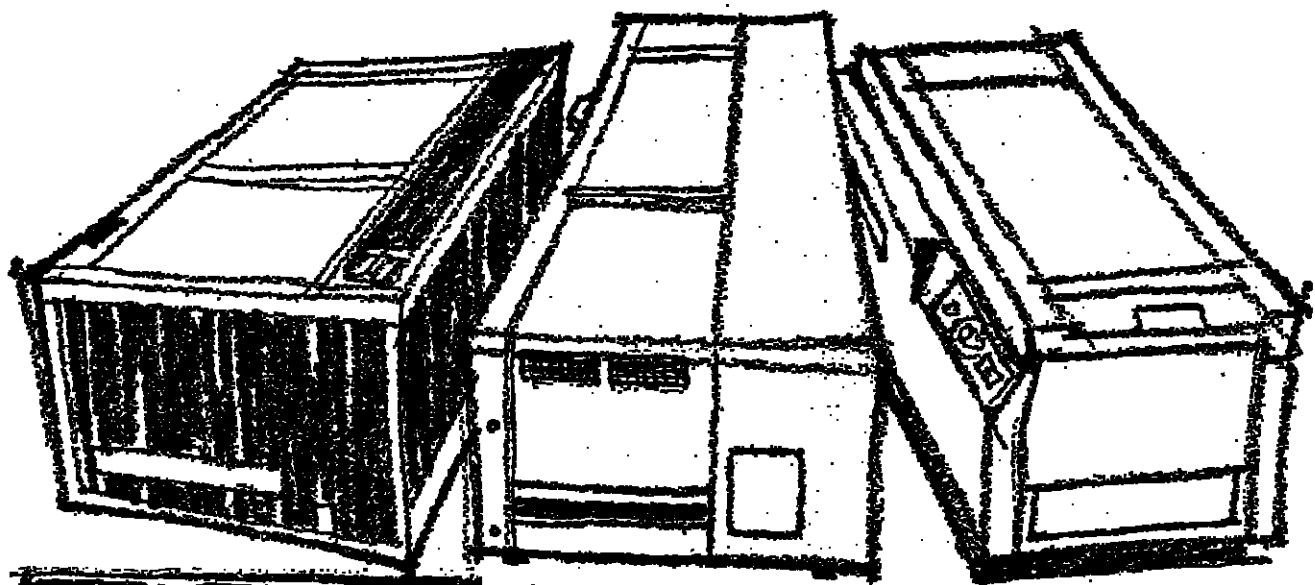
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ALLIS-CHALMERS

HALMI

Sir Derek Pritchard
**A theme
for
1972**

INTRODUCING the importance of his position. There were two and medium-sized law firms. He said, "I have tremendous faith in you."

Sir Derek proposed the topic of "Youth Development's theme to Sir Institute's theme to should seek to embrace of 20 or 30 who enter the door with new plans.

He also stressed to young businessmen entrepreneurs an ability to be more vital than in future.

The Institute was its strength continued every day. He commended them in confidence membership increased.

Lord Goodman
**Fortified
by Six**

SUPPORTERS of the Market were urged by Goodman, chairman of Council, to keep pressure for Britain's the European Economy.

Speaking on the topic of a changing society, he noted it could fail as he had remarked before in former entries.

"I don't think the people who regard the market as a vital part of the country will allow the founder because of a part of the crucial reported."

"If we lose the opportunity, it must be extremely difficult to find a further opportunity in our lifetime."

He believed that if not a simple proposition it had been presented which might be done of people. He pointed as a very important arrangement was with the U. S. war market most business clerks had to find expense of entry was one of the visible transactions he entered into for a long

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A report says how one Japanese room for workers will have a big sick bay figure of the boss. A difference can be seen in the

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Bull. Dr. Graham
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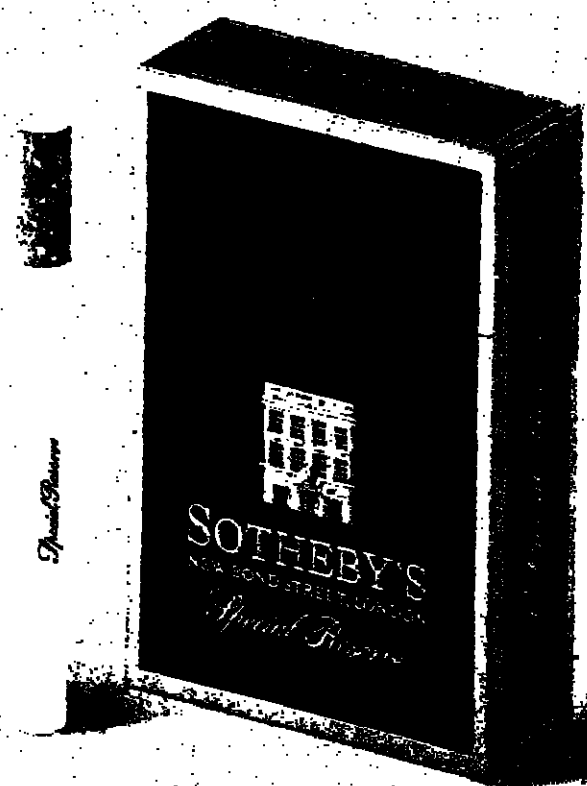
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USE OF THIS BOOK IS LIMITED TO THE
LIBRARY OF THE UNIVERSITY OF MICHIGAN



J. J. Audubon, Roseate Spoonbill, one of the 435 hand-coloured aquatint plates from the *Birds of America*, the finest book on birds ever produced, printed between 1827 and 1838. A copy of this book was sold at Sotheby's on 11 November 2010 for £100,000.



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Special Reserve price 30p* for twenty.

EVERY PACKET CARRIES A GOVERNMENT HEALTH WARNING

£15m. electronic exchange for P.O.

BY DAVID FISLOCK, SCIENCE EDITOR

THE FIRST order, worth £15m., for a new generation of switching equipment, has been placed by the Post Office. It is the biggest single contract for electronic exchange equipment yet given by the P.O.

The system, known as TXE 4, is an electronic method of switching, designed to replace the electro-mechanical Strowger system that now forms the backbone of the British telecommunications network.

Key reasons

The system, a joint development of the P.O. and the telecommunications industry, is a replacement for large local exchanges of up to 40,000 lines. Standard Telecommunications has received the initial order, to complete the development and supply 15 of the all-electronic exchanges, with the first destined for London early in 1975.

Choice of the TXE 4 is the first decision of a lengthy assessment that has continued for two years past, almost since the P.O. became a corporation.

By its choice of an analogue system of switching for this central role in telecommunications, the P.O. will disappoint those who hoped it might select a more advanced digital system, designed around a computer.

We could be criticised for being relatively conventional, Mr. Edward Fennelly, managing director of P.O. Telecommunications, told me "but it's very secure, and it offers us the scope we need for our new services."

Mr. Fennelly gave three key reasons for choosing the TXE 4 system, despite the trend of P.O. development towards a largely digital network.

First, it is modular and, therefore, very readily expanded. Second, the security of the system is spread throughout the exchange, so that it "fails soft". Third, it is readily maintained and failure situations can be recognised in good time.

A more advanced system would have required a further three years' development, and the cost would have been higher, he said. Such a system, using stored programme control, was expected for the new trunk exchanges, coming into service around 1977-78.

The P.O. expects to place a development contract with industry in about a year's time for the digital trunk exchange.

Although Standard Telecommunications has played a key part in the development of the TXE 4 system, the P.O. retains the right to go out to tender for further orders.

It was the first time, said Mr. Fennelly, that the P.O. had been able to buy a new technology competitively.

The P.O. expects to spend about £15m. a year on new switching equipment for the next five years, of which about £7m. is currently being spent on Strowger equipment.

Nottingham exchange

Another Post Office order, worth £2.3m., was also announced yesterday. The contract, for a crossbar group switching unit, has gone to GEC-ALC Telecommunications. The exchange will be sited in Nottingham and will serve 65 local exchanges.

Building upsurge is widespread

By Michael Cassell

THE UPSURGE in building no longer appears to be confined to the larger builder or to isolated areas of the country.

The latest trade inquiry by the National Federation of Building Trades Employers shows that the improvement in activity, which has become evident in recent months, is becoming more widespread with larger numbers of companies expecting next year to be better than this.

The quarterly review, undertaken at the beginning of October, shows that contractors' orders books continued to show improvement at that time.

Of the 306 replies received from member companies, 238 (78 per cent.) said they had dealt with more inquiries than at the start of July when the last survey was made. A further 181 companies reported a similar level of inquiries and 129 said they had received fewer approaches.

Another 35 per cent. estimated that they had more work in hand while 32 per cent. reported that they had more work ready to start.

As to the future, 219 companies (72 per cent.) thought they would do more work in 1972 than in the current year. A similar percentage, however, forecast little or no change in the volume of work they will undertake, while the remainder expected to do less.

An NFBE spokesman commented: "This time, the improvement seems to have affected companies of all sizes, from the largest to the smallest."

There was also evidence that the work load was becoming more evenly spread throughout the regions, although there remained some reservations about Liverpool. A majority of members there believed they would do less work next year.

CBI gives warning on W. Midlands

BY MICHAEL CASSELL

ALTHOUGH THERE were no signs that the economy was about to take an upward turn, there were no grounds for euphoria in the West Midlands, Sir John Partridge, president of the Confederation of British Industry, warned yesterday in Birmingham.

Sir John, addressing the annual lunch of the CBI Midlands Region, said some sectors of the economy were beginning to benefit from the recent relaxation measures and that the upward trend of prices was starting to flatten out.

The CBI's own latest inquiry revealed the first signs of a brightening outlook.

But the signs had not so far added up to much in the West Midlands, an area with a serious unemployment problem which continued to suffer from an excess of disruption to production. There was also an over-reliance on one sector of industry.

There are certainly no grounds for any kind of euphoria here, I understand this and I would like you to know that when we recently put a number of proposals to the Government in relation to unemployment we were not speaking only of the development areas."

Sir John said the West Midlands unemployment situation was specifically referred to in talks with the Government and the CBI request to assist the heavy capital goods industries, by enabling the nationalised industries to advance investment programmes, could well help industry in the region.

Even though the economy may at last be moving in the right direction, there is a need for urgent selective action in areas where unemployment is well above the national average.

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STOCK EXCHANGE BUSINESS IN OCTOBER

Turnover falls £1,583m. from September peak

BY ERIC SHORT

TRADING CONDITIONS were comparatively quiet on the London Stock Exchange in October after the hectic trading of the previous month. Business fell by £1,583m. to £5,562.1m. from the peak figure of £7,145.1m. in September.

The Financial Times Stock Exchange Turnover Index for All Securities was 185.6 in October, compared with a record 238.4 in September and 151.1 in August.

However, with business exceeding £5,000m. for the fifth time this year, it would indicate that the boom experienced on the Stock Exchange still has some steam left. The level of £5,000m. had not been reached prior to 1971 since the figures were first published in 1964.

All sectors of the market recorded a lower turnover in October. In fact, it dropped to £1,438m. to £4,084.5m. both short-dated and other stocks participating in the fall. The Financial Times Turnover Index for British Government securities in October was 135.2, against a record 236.9 in September and 139.9 in August.

Business in other fixed-interest securities fell by £71m., so that turnover in all fixed-interest securities slumped £1,309m. to £4,084.5m.

Conditions were also quieter in the equity sector where business was a marginal £1,153.2m. to £1,153.2m. a fall of £74m. on the month. Even so, turnover in Ordinary Shares has exceeded £1,000m. for seven successive months stimulated by the sustained activity in the merger and take-over field. The Financial Times Turnover Index for Ordinary Shares in October fell to 238.4 from 253.7 in September, illustrated by the performance of the U.K. Local Authority.

Although there was a few business days in October compared with a month earlier, the number of bargains fell by only 1,000 to 615,799, the third highest number this year.

The total of bargains in equities, however, rose by over 9,000 to 492,244, the second highest in 1971 and showed that the fall in turnover was due to a lower average size of bargain. Fifty-months and drifted lower on it, was a persistent small selling of the an unwillingness of buyers to enter the market. The vote for entry to the EEC on October did not produce any total reaction in the equity market.

The erratic movement in equity prices was shown by the movement of the Financial Times Industrial Ordinary Share index in October. From 406.9 at the start of the month, it climbed to 422.9 on October 23, its highest value for over four years. From there, it drifted down to 406.9 on October 29.

Prices of equities during the month failed to maintain the levels reached in the previous months and drifted lower on it, was a persistent small selling of the an unwillingness of buyers to enter the market. The vote for entry to the EEC on October did not produce any total reaction in the equity market.

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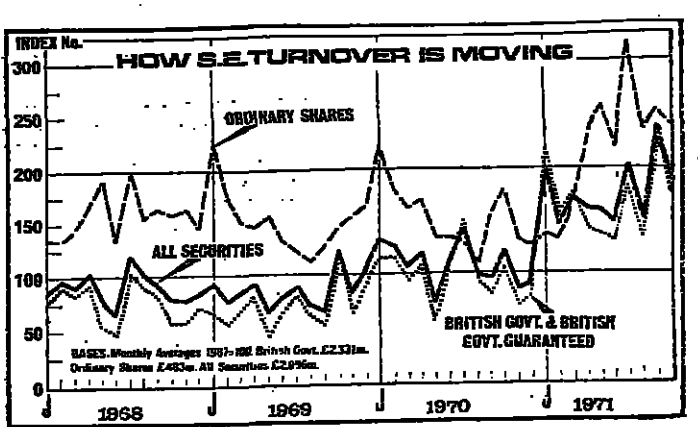
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with a month earlier, the number of bargains fell by only 1

Don't overdo it this month

By Our Own Correspondent

BY JAMES McDONALD, SHIPPING CORRESPONDENT

Leader

Vital world monetary role seen for EEC

Changes in the price differentials between various types of lounge bars were to take place gradually over the next few weeks. In doing so, this would have meant Skol going up to 20p a pint.

Press inquiries apparently reached Allied Breweries (U.K.), Russell's parent company in London, which later announced that there would be no increase in beer prices in line with the company's undertaking. The company statement added, "A report on price leadership, indicating price differentials, was incorrectly inter-

Gr

But, unusually in this class, the BMWs are snuggling: their toolboxes, toolkits, and toolkits are sinking into the cool, spacious lockers, even the programme wipers and the BMW range also includes the

Inside e

inside

very driver

e eve

In the cool fresh atmosphere of a boardroom silence, he and his partner discuss business.
But, with another part of his mind, he will secretly be having fun.

2002: £1899, 119 mph BMW 2002 (if: £2299)
All prices shown are recommended

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The price of the new 121 mph
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W 3.0 S: £3699. 133 mph BMW 3.0 Si: £3999.


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The New 121mph BMW 2500

Financial Times Reporter

PLANS For Overseas Container
The Australian Container Line (ACL) and Japanese and German companies are planning to run an integrated container service in the north-western Pacific by the decision of Associated Container Transporters (Australia) to withdraw from the United Australia-Europe container service, according to Mr. Davidson, a director of Ben Line Containers.

Speaking at Basildon last night, he said that, as a member of ACL, his company was continuing to make plans for an integrated Europe-Far East container service to start next January.

From next autumn, ACL (Australia) are to operate the line's regular round-the-world container service.

By Kenneth Gooding
LIED BREWERIES yesterday cancelled arrangements which would have had the effect of putting up the price of St. Austin's stout lager in 1,000 public houses by as much as 42 per cent.

The pubs affected were under the Ansell's banner in the Midlands. Changes in the price differentials between various types of lounge bars were to take place gradually over the next few weeks. In some cases this would have meant Skol going up from 20s to 20s 6d.

Press inquiries apparently reported Allied Breweries (U.K.) and Russell's parent company in London, which later announced that there would be no increase in beer prices in line with the current undertaking. The company statement added, "A report of price leadership, indicating price differentials, was incorrectly interpreted as a recommendation that the price of draught Skol should be increased. This has been clarified."



**When a man sees
handful of luxury**

engined projectile.
Or he may examine
Showing well-heeled
With five seats
things and a rich
respect everywhere
luxury.
But, unusually in
Smuggling their
sinking into the
capacious lockers
programme wipers

The BMW range also includes

Inside

BMW Concessionaires GB Ltd

A close-up photograph of a white license plate with black lettering that reads "BMW 2500". The plate is mounted on a dark-colored car, and the background is dark and textured.

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the 186 mph BMW 1602: £7745. 113 mph

every drive

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taught by example

But, with another

BMW 2002 - £1889, 119 mpg BMW 2002i
All prices shown are
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travel. "If design could
Amocar," says, "we wo

BMW owner will engage
of the carriage trade do
he has used his spend
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£2299. 108 mph BMW 2000: £2199. 130
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London Showrooms, N.A.T.O.

A thrill for the Hitler
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Excelsior when the parking.
The flat black key to
 Even the BMW 2500i. Flat, black, computer- When you turn it, you driving pleasure you th

The price of the new 1.
Sports automatic trans
 optional extras

BMW 3.0 S: £3699. 133 mph BMW 3.0 S. **Corner. Unbeatable.** Diplomatic and Export Office, 55 F...

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Inside every driver there's a BMW owner. *Unbeatable*

BMW Concessionaires GB Limited, BMW House, Chiswick High Road, London W4. Tel: 01-995 4651. London Showroom, M.A.T.O., Diplomatic and Export Office, 56 Park Lane, London W.1. Tel: 01-499 6881.



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Opportunity exists to head up the group litigation department in the short/medium term—particularly interesting commercial environment.



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This vacancy is open to qualified male or female solicitors aged 24-32, with a minimum of two years' post qualification experience gained in a private or commercial firm of solicitors within the general or litigation spheres. (Outstanding candidates with less than two years' experience will also be considered.) The successful candidate will report to the Group Solicitor, and responsibility, in this very important and central department of the company's total operations, will be to liaise with and advise the company's Directors and Heads of Departments on a variety of legal matters, such as the method and execution of particular commercial transactions including those with a foreign element, industrial relations, etc. A full continuation training will be given. Candidates must be adaptable, practical and have the ability to stand by their own judgment. Initial salary negotiable £3,000 to circa £4,000; non-contributory pension; assistance with removal expenses if necessary; special mortgage arrangements available after three years' service. Applications in strict confidence, under reference 53162/FT, to the Managing Director.

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Old Broad Street Securities Limited require an additional executive in their New Issues and Mergers Department as a result of continuing expansion.

The successful candidate will be in the age range 26 to 30 years and applications are invited from those having experience of issue, merger and other corporate finance work and who have the personality to negotiate at Board level.

The salary is open to negotiation and will amply reflect the successful candidate's age, experience and qualifications. The Bank operates a non-contributory pension and life assurance scheme and offers other fringe benefits.

Please apply in strictest confidence quoting reference number 1800 to Clive & Stokes, 14 Bolton Street, London W1Y 8JL.

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Appointments & Personnel Consultants

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Young, Qualified

SOLICITOR

ACCOUNTANT

required for new issues and company finance. This interesting work, on which he would be directly assisting Partners, has excellent prospects for advancement. Remuneration not less than £3,000 p.a. initially.

Apply in writing to:

J. G. Day, 12th Floor, The Stock Exchange, London, E.C.2.

The Instant economic on the way to work

BY A U.S. CORRESPONDENT

With the price freeze and other actions sharpening the Government's impact on business, American managers can now receive a monthly non-public discussion of economic matters by some of the country's leading experts.

And to fit into an executive's busy day, the discussion comes on a tape cassette which can be played in the car while en route to work or appointments.

The monthly tapes are offered by the First National City Bank. In addition, the \$75 annual subscription entitles the subscriber to send in questions to the panel of the bank's experts for later discussion.

Each tape plays for about 40 minutes with discussions being moderated by John Daly, a prestigious American TV commentator. The economists are six of the bank's chief advisory officers.

The Bank says that Daly has the ability to ask the sort of questions which bring out informative answers.

The discussion panel is led by Leif H. Olsen, senior vice president in charge of the economics department. He has access to the work of some of the best economists in the department who ensure the listener hears the inside of the bank's thinking. Instead of getting the script of the monthly discussions, however, it points out that the tapes can be used for staff meetings or group training sessions. In offering the service, the bank points out that the discussions of the administration's recent economic moves are not only short-term, but will have repercussions months and months later. The offer itself shows of the bank's interest in the economy's import-heavy sector. With its tape service, the bank offers a cassette player for tapes. It's made in Japan.

Television links Berger offices

BY ELSETH GANGUIN

BERGER PAINTS claims to be the first company to have booked time on the Bristol GPO Confrat System for a two-hour meeting with its London head office.

The television link will replace regular traffic between Berger's Bristol men and the head office, "costing large amounts of time and money." Already a meeting which would normally take nearly all day, was completed in just over two hours.

"Far less time was wasted by participants than at a normal management gathering," says Berger, what is more, "the Bristol people were unconcerned about being televised because they have been used to closed circuit television in their management training schemes."

By using the Confrat system the Bristol men had the best of the working day at their work. How did it suit executives? "These superb meeting conditions obtrusive... and there feeling that the executives participating in a normal meeting were talking to the screen without any method of speeding communication. What is more, 'Confrat' imposes economic discipline matters to be discussed, the shuffling of thoughts for national need to finalise vital expression and communication."

Furthermore, the cost of the television link was said to come in at less than a normal meeting. The cost involved in a trip to London, for example, was estimated at £100.

"It certainly seems an ideal method of speeding communication for Berger, which intends to use the system again," I was told.

The booking, was made at short notice to meet an urgent operational need to finalise vital expression and communication."

Selling porcelain on the racetrack

BY NORRIS WILLATT IN GENEVA

SPONSORSHIP by industrialists of international motor racing tracks by Silverstone, Magnetics, as well as the sport itself. Normally the sponsors are in some way connected with the motor car industry itself, or are companies with an international inaccessibility value. Moreover, But, in 1972, the major circuits will play host to a new name. His products by car and unusual type of sponsor, an Italian manufacturer of china-ware who thereby expects to give a valuable boost economically to his export sales.

He is Signor Giulio Pagnossin, who he would be able to with a factory making some plates, tileware and other types of porcelain tableware at Treviso, about 25 miles north of Venice. At the present time, he is organising the Ceramich Racing Team, which key markets, as Great Britain will be represented at all the West Germany, France, Holland, formula one circuits next season by a Surtees model powered of what he is about as sure as car will be driven by Italian ace Andrea de Adamich.

Signor Pagnossin is putting some £25,000 behind the car itself, while outlays for expenses, insurance, maintenance, transport and publicity are expected to bring his total investment for the first year up to around £65,000. It seems that the industrialist considers the money will be well spent in terms of exposure that his company will gain as a result.

His optimism seems well founded. In the first place, there is the factor of novelty, in more ways than one. Thus, at the present time, no other china-ware manufacturer in Italy, or anywhere in the world, has chosen this unusual form of publicity and marketing; racing fans hardly fail to take notice. Secondly, while Italian manufacturers of products have widely used such sports as cycle racing and basketball to call attention to their products and trade marks, this is the first time any of them has turned to motor racing, other than those connected with the sport, or with famous marks.

Specifications and Conditions are obtainable against an unrefundable fee of 150 Libyan Dinars, from The Technical Committee for Preparation of Specifications for Grain Stores, Ministry of Agriculture, Sidi Mesri, Tripoli, Libyan Arab Republic.

The Closing date of this tender is 19th December, 1971.

The Central Tenders Board invites bids to Tender to undertake construction and equipping grain silos in Hashan, Tobruk, Sebha, Swani, with capacities of 20, 10, 10, 10, thousand tons respectively.

Further, Signor Pagnossin considers this type of advertising relatively economical. If he were to use the conventional media, such as television, radio, newspapers, magazines, billboards, point-to-point displays, in all the markets where he hopes to expand export business, the outlay would be many times the sum he now is contemplating investing in the racing car.

Demot Hoare, who set up a scheme, says he does not compete with professional research companies, but sees potential for short-term assignments in cost reduction, personnel management, stock control, and financial control, as well as straight research.

The cost of the service is 15 per cent to companies who staff, and £1 registration fee for the redundant man.

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CJRA ROBERT FLEMING & CO. LTD.

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INVESTMENT ANALYST—Engineering

This vacancy is caused by promotion and calls for candidates aged 23-28 with a minimum of one year's practical research experience in the Engineering field, gained either with a Merchant Bank or Stockbrokers. (Candidates within the age group with experience in investigation work gained solely in the engineering environment will be considered.) Responsibility will be to the Head of Research, for conducting research into Engineering Companies involving visiting organisations, processing information from Stockbrokers, writing conclusive reports and advising Investment Managers. Clear prospects exist to advance to Investment Manager in the short term—or to a Far East or U.S.A. posting with scope for increased responsibilities. Salary negotiable plus non-contributory pension scheme, free life assurance, free BUPA and assistance with removal expenses if necessary.

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Robert Lee & Partners

In no circumstances will applicants identities be disclosed to our client without authority

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require experienced man to take senior position in Private Clients and Banks departments. Good prospects. Salary by arrangement. Write giving full details to Box A.233, Financial Times, 10, Cannon Street, EC4P 4BY.

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COMPANY NOTICES

THE CONSOLIDATED DIAMOND MINES OF SOUTH AFRICA LTD. (Incorporated in the Republic of South Africa)

NOTICE TO HOLDERS OF SHARE WARRANTS TO BEARER

With reference to the notice of declaration of dividend advertised in the Press on 23rd September 1971, the following information is published for the guidance of holders of share warrants to bearer.

The dividend of R1.50 per share was declared on 23rd September 1971, and is payable on 27th October 1971, to holders of share warrants to bearer.

Share warrants to bearer, in respect of the dividend, must be presented at the office of the Registrar of Companies, 10, Cannon Street, London E.C.4, on or before 27th October 1971, for endorsement.

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Is slow payment by your customers slowing down your own expansion plans? If it is, Bankers Trust Factors can help. Factoring speeds up cash flow, releases immediate finance for expansion.

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Managing director of well established Hong Kong manufacturer/exporter arriving early November to sell garments, especially jeans and trousers. Please contact Mr. Assomull, 01-628 4164, earliest, leaving name and phone number.

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We have been described as "Turnaround Men" and "Company Doctors" amongst other ill fitting labels; more important than what we are called is what we do. We are a small, highly specialised management consultancy engaged in the business of returning loss making Companies to profitability and/or improving the return from slow performers.

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If you feel that a meeting would be of interest, without obligation to either side and in strict confidence; then we should be pleased to receive brief details of your Company's history.

Enquiries from Principals only please to: Box B.6295, Financial Times, 10, Cannon Street, EC4P 4BY.

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EDITED BY
DAVID PALMER

Your Business Problems

CONGLOMERATES

A poisoned dart from Congress

BY GUY de JONQUIERES

THE discussion of the economic situation in the United States has been dominated by the theme of inflation. But there is another, less obvious, danger lurking in the background. It is the danger of extreme centralisation of power in the hands of a few men. This is the danger of a "poisoned dart" from Congress.

Just how effective this technique can be is illustrated by the performance of ITT in 1968. Its subsidiaries, for example, were accounted for \$1,300m. of its increase in sales, which would otherwise have fallen by \$36.1m. Domestic acquisitions also accounted for \$54.7m., or almost 90 per cent. of the total earnings increase.

To maximise earnings, the report finds that its sample corporations invariably used the most favourable accounting methods. The most popular was "pooling of interest," which offered a number of accounting advantages to the conglomerates. ITT's net income in 1968, for instance, would have been 70 per cent. smaller if the more conservative "purchase" method had been used by its accountants, according to the report.

The impact of these inflated earnings on their stock prices enabled the conglomerates to undertake ever larger acquisitions and to pay for them by issuing new paper and stock certificates. Leasco used its high free-earning ratio to take over Reliance Insurance, whose net income was 25 times and total assets seven times those of Leasco.

The conglomerates' primary interest in the financial, rather than productive potential of their acquisitions is reflected in their financial management after absorption. In most cases, the conservative debt policies of the acquired companies were largely abandoned in favour of debt ratios well above those considered safe by the "blue chips." In the case of LTV, this policy is blamed for bringing the entire colossus to its knees. At the same time, net earnings were hugely inflated by means which often deprived subsidiaries of internally-generated investment resources.

One particularly adept gimmick picked out by the Celler report is the conglomerates' management and accounting methods. The conglomerates' management and accounting methods might seem less questionable if they were able to point to solid achievements in raising productivity and efficiency among their subsidiaries. But the report seriously challenges the value of the twin creeds of the conglomerates: the concept of "synergism" (or two plus two equals five) and the assertion that professional management is the exclusive key to running successful companies, no matter how diverse their activities.

Management difficulties with newly-acquired companies showed, if anything, that combination frequently had injurious effects on efficiency, productivity and corporate values," it comments. The staff put a total of 28 companies acquired by ITT, Litton, Gulf and Western and LTV to three financial test ratios

game," which deceived everyone at the time. The conglomerates' management and accounting methods might seem less questionable if they were able to point to solid achievements in raising productivity and efficiency among their subsidiaries. But the report seriously challenges the value of the twin creeds of the conglomerates: the concept of "synergism" (or two plus two equals five) and the assertion that professional management is the exclusive key to running successful companies, no matter how diverse their activities.

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Harold S. Geneen, president of ITT.



James Ling, former chairman of LTV.

Serious challenge

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BUSINESS BOOKS

The easy way to learn accounting
By Terry Dodsworth

The Meaning of Company Accounts by Walter Reid and David Myddelton, Gower Press, 26.25

OF ALL the subjects covered in management development programmes, accounting is probably the one in which non-specialist managers are most immediately interested. Yet management teachers have consistently found a problem in teaching accounting. First, managers have widely varying experience in using accounts, and hence different learning needs. Secondly, most of the teaching material available for non-financial managers has been developed for use in America.

The Meaning of Company Accounts aims to fill this teaching gap. It has been developed in the classroom at the London Business School over the last two years by David Myddelton and Walter Reid, and is now being used on the accounting courses on its three main programmes. In two volumes, one bound and the other loose leaf, it has much of the appearance of a programmed text, but retains concise introductions to each chapter.

Basically the idea is to provide a complete programme in volume one, with both text and examples, so that it can stand alone. Volume two—the loose leaf one—has additional material consisting mainly of problems (with answers provided separately) for those who need extra practice or revision.

Most of the material in the workbook has been extensively tested with managers on courses. The result is a package that can be used by individual managers or on in-company programmes requiring only minimum supervision. The price, at 26.25, seems pretty hefty, but for that you get a total of 496 pages which should leave the diligent student in a position both to understand and to work out accounting problems for himself.

Brewers win management game

A BASS Charrington team, has won stage two of the Olivetti Management Competition, beating Dunlop, winner of the first stage, into second place. Two teams of individuals were placed third and fourth.

Victory carries with it a \$500 prize and the knowledge that George Sharman, the Sundridge Park specialist who devised the game, regards it as the best contest he has seen in the three years he has organised competitions. Sundridge Park Management Centre was host to the final stage, after the first rounds were played through monthly issues of the magazine Business Administration.

is LTV's much-vaunted "project redeployment." This entailed the sale of minority interests in LTV subsidiaries to the public. The parent company retained the acquisition, while those of 18 subsidiaries and thus exercised unchallenged control over such matters as dividend payments. The report castigates this as "a highly imaginative confidence

(net income/sales, net income/assets, sales/assets). It found that the majority of the ratios improved for only seven after the acquisition, while those of 18 deteriorated.

The report also has some sharp words for corporate ethics. It suggests (without making specific charges) that several conglomerates indulged in reciprocity (you buy from me, I buy from you), though most had statutory prohibitions against it. There are numerous indications of "insider trading" in connection with takeovers and of questionable relationships between the conglomerates and their banks.

Curious ambiguity

The attitude of the banking industry towards the high-flying conglomerates is very ambiguous. On the one hand, such a pillar of the establishment as Chase Manhattan was deeply involved in Gulf and Western's affairs and apparently an enthusiastic participant in its business ventures. But when it was learned that Leasco was considering a bid for Chemical Bank, the banking community drew together and rounded on the impertinent challenger. Even Leasco's investment banks let it be known that they would not handle such a bid and Leasco was forced into dropping it.

Despite all the intriguing evidence turned up by the Celler inquiry, it leaves one key question unanswered. Why was no government action taken to check the conglomerates and their practices when they were so clearly in violation of accepted management and accounting principles? Some steps have since been taken to tighten up on accountancy and disclosure regulations. The strong implication is that they were not taken before because the interested government agencies and the stock exchanges were, like the investors, mesmerised into believing that the conglomerate managers had truly found an alchemical formula which would last forever.

8 good reasons for leading your company to expansion in these areas

If your company is planning expansion, a close look at the many benefits in Britain's Areas for Expansion could pay off handsomely. These Areas consist of the Development Areas (including the Special Development Areas), the Intermediate Areas and Northern Ireland. They offer solid advantages which could make all the difference to your own company's future growth.

Firms providing new employment in the DEVELOPMENT AREAS can get these benefits. Consider how many would help you:

- 1 Building Grants**
Grants towards the building of new factories can be as high as 45% of the building costs.
- 2 Tax Allowances**
These include a special first-year allowance of 100% of expenditure on new immobile machinery and plant and 44% of the construction costs of industrial buildings (after deducting any grant).
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- 4 Removal Grants**
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- 5 Training Grants**
These amount to £10 per week for each man (£7 per week for each woman) during the period of their basic training for additional jobs provided in the Area. Various forms of direct help with training are also available.

The Areas for Expansion
Get the facts from the Department of Trade & Industry

BY OUR LEGAL STAFF

What are now the main pros and cons of putting one's private investments into a private investment company?

The main disadvantages are as follows:—

- (a) Capital gains realised on changes of investments are taxed at a higher rate. With corporation tax at 40 per cent, this difference can be large, bearing in mind that the individual may pay gains tax at considerably less than the maximum of 30 per cent.
- (b) The net gain made by the company after tax goes to enhance the value of the company's shares, and when the shares are ultimately disposed of, which must happen sooner or later, this increase in value is again subject to capital gains tax.
- (c) If any of the income of the company does not consist of franked investment income, corporation tax is payable by the company, and in so far as the net income remaining is distributed (which will usually be compulsory in the case of a close company holding investments other than land), income-tax liability is incurred also.

The advantages are:—

- (a) That a part of the company's income can be paid out as director's fees which qualify as earned income in the hands of the recipients, and assuming the fees are reasonable the amount so paid will qualify for inclusion in the company's management expenses claim, enabling it to reclaim income-tax deducted at source, from its franked investment income or reduce corporation tax liability on non-franked income.
- (b) If the investment income consists of "estate income," that is, income from real property in a managed estate, the whole of the net income remaining after corporation tax need not be distributed; 40 per cent and sometimes more can be retained; and if this is done then the income so retained bears tax only at corporation tax rate instead of income-plus-sur-tax rate. However, since the distributed part attracts income-tax liability, this does not become an advantage unless the individual's surtax rate is high; and furthermore, the advantage is partially offset by the consideration that in so far as income is left undistributed in the company it will go to enhance the value of the shares and thus

enhance a potential capital gains tax claim.

Power to ban dogs

In a reply on September 25 you stated that a council has power to ban dogs from recreation areas. My council as trustee of the parish recreational field is trying to do just that, but the Home Office state they will not confirm such a by-law. Can you help?

It is difficult to be absolutely certain as to the powers of the council as trustees of the recreation field, but we think that in all probability you must be covered by the Recreation Grounds Act of 1958, which gives trustees in such circumstances power to make regulations. These can be enforced by indictment, or by injunction, but not by means of monetary penalties. They require approval by the Charity Commission, but if reasonable, I would always be approved.

Valuation of a house

Just before the introduction of capital gains tax in 1965 I sold a house for £1,500 and just after it another for £1,700, the houses being identical except that the second was so situated that a garage could be built whereas in the case of the first it could not. I was charged tax on £200 gain over the April 5, 1965, value and on my protesting to the District Valuer was told that there was no right of way to either house for a vehicle. I cannot see that anybody will enforce this restriction, and I now find that a garage has in fact been built. Is there anything I can do at this stage?

You should take the matter up with your Inspector of Taxes, explaining to him that the District Valuer appears to have misdirected himself in stating that a higher valuation could not be accepted for the second house, because the deeds did not indicate a right of way.

If it is physically possible to have access for a garage, then a higher valuation will be justified in the expectation that at some time a garage may be built. It is quite clear that a house which has no physical possibility of a garage will be worth less.

There is no way of appealing as such at this stage. However, if the Inspector is unable to help you may consider taking the matter up with your Member of Parliament, with a view to him raising the matter with the Parliamentary Commissioner.

No legal responsibility can be accepted by the Financial Times for the answers given in these columns. All inquiries will be answered by post as soon as possible. No charge is made for this service except in relation to investment matters.

Commuting a pension

I am retiring shortly with a pension of £1,600 and I have an income of £90 from a building society. I am allowed to commute up to one quarter of my pension and for each £100 I commute I receive £1,000. I give you my guidance as to how much I should commute and what my net income will be at various levels?

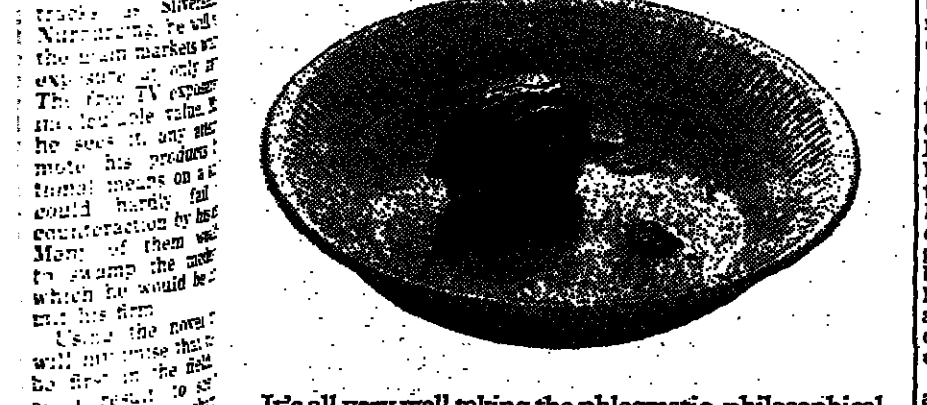
For each £1,000 you receive in commutation of your pension you will lose £100 per annum. To replace the income you will have to earn 10 per cent of your investment before tax. However, after tax, the position is as follows:—

on £100 of income or £1,000 invested:	
Pension income	£89.86
Dividends and interest income (showing 10 per cent return)	61.25
Building society interest	50.00

We cannot be more specific, as you have not given us details of your tax allowances.

You should, however, consider what need you may have for capital in the future and how soon you will be receiving a government pension.

Peck the pickled walnuts and pull out.



It's all very well taking the phlegmatic, philosophical approach. It's all very well sitting back and saying "Ah, anything worthwhile is worth waiting for." But some people are growing a little tired of the continued absence of KlosterPrinz from the wine-lists of certain restaurants.

If you happen to be one of these people, here's what to do. Enter any one of these obstinate eating-places, ask to see the wine list before you look at the menu, then fix the waiter with a steady gaze and say "You are seemingly unaware, my good man, that KlosterPrinz is a veritable Prince of Piesporters, a deliciously crisp Moselle with the merest hint of dryness; the highest compliment that can be paid to good food. Well, I am about to teach you a lesson you won't forget in a hurry." And so saying, you peck his pickled walnuts, savage any other savouries that may be in sight, whisk them from the table and disappear silently into the gathering dusk.

Leaving behind you confused conjecture on the lines of: "Who was that man? The Lone Ranger?" "No, actually I think it must have been the local KlosterPrinz connoisseur. We'd better order a case or two." Quite so. Or three.

KlosterPrinz
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These are payable to manufacturers at £1.50 per week for each male adult employee (75p for each female) until September 1974.

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WEDNESDAY NOVEMBER 3 1971

PROBLEM AREA OF THE U.K. CHEMICAL INDUSTRY

Plastics and profits: unease gives way to dismay

BY JOHN TRAFFORD

Authority at Heathrow

MANAGEMENTS must manage. This dictum, which is not always observed in British industry, is being defended with some energy by the British Airports Authority as it struggles to maintain control over baggage handlers at Heathrow Airport, London. A great deal of the work of the airport has been at a standstill for the past two days, and it remains to be seen whether the men return to work to-day. A vote taken at a mass meeting yesterday suggests that they may not. But British European Airways has warned that those of its workers who are not back at work by noon to-day will be considered to be in breach of contract of employment. Six members of the unofficial shop stewards' liaison committee have been issued with Orders by the High Court: these restrict their activities until Friday.

Objection

The immediate matter in dispute is the acquisition by General Aviation Services, a Canadian-based company, of a contract to do the ground handling work for Iberia, the Spanish airline. This contract was held by KLM until October 31: the ostensible objection to its transfer has been that some men's jobs are thereby threatened. The British Airports Authority has done its best to convince the men that there will be no redundancies as a result of Iberia's new choice of baggage handling company; this has proved fruitless. There is another objection: that GAS, a private company, is an intruder upon a turf that is sacred to nationally-owned enterprises like BEA and BOAC. This is not an objection that the Airports Authority can be expected to take seriously.

The dispute has a long history. It first broke out nearly two years ago, when the original ground-handling contract was

An ambitious programme

THE SESSION of Parliament which opened yesterday is likely to be the most eventful and bitterly contested for several years, if not several decades. The first session which lasted from the General Election until the end of last week certainly had its moments of eventfulness and bitterness, but it has really taken both Government and Opposition 18 months or so to accustom themselves to their new roles and for Labour, in particular, to wake up to the fact that the present Government is notably radical, by modern standards, and unusually determined in pressing its ideas through the House of Commons. Now that this realisation has sunk in, the clash is likely to be very fierce.

Centrepiece

The Queen's Speech is not much more informative than most of its kind and contains perhaps more than the usual ration of harmless clichés. To say that the Government's purpose is "to maintain the North Atlantic Alliance, sustain the Commonwealth association and uphold our other friendships and alliances throughout the world while continuing their efforts to achieve international agreement on arms control and disarmament" is to say no more than that Mr. Heath's administration, like all its predecessors since the war, wants to have the best of all possible worlds. The same might be said of the economic objective of increasing employment, promoting growth, curbing inflation, encouraging efficiency and maintaining a strong balance of payments. Nevertheless the speech does give some idea of the Government's strategy for the next 12 months.

The centrepiece of the legislative tableau is the Common Market Bill (or Bills), which will be introduced in February. Clustered around this are a group of other major Bills which will all be intensely controversial and time-consuming, but which will fulfil pledges in the Conservative election manifesto and, in part, will consolidate the Government's claim to efficient reform if it should prove possible or necessary to call a General Election during the course of 1973. In this case-

OF the oil and chemical industry managers interviewed for the Financial Times monthly Survey of Business Opinion, published last Monday, 94 per cent. expected that profit margins would remain the same in the next 12 months or else fall. The contrast with the views of industry as a whole could scarcely be stronger: for the past six months over half of the respondents have said they are expecting an improvement.

On the face of it, the gloom of the oil and chemical men may seem strange. Their companies can boast plenty of management talent and their problems, although formidable, are arguably no worse than in many other parts of manufacturing industry.

Meeting new situation

Part of the reason for the present pessimism lies in the success of past years. For chemicals as a whole, output has been rising by between 5 and 8 per cent. annually, rather more than twice the growth of all manufacturing industry. When most of that growth suddenly evaporates, as it has done in many sectors of the chemical industry, heavy demands are put on managements to come to terms with the new situation. This presents problems since none of them has had to face up to anything quite like it before.

No chemicals sector has suffered more from non-growth blues than plastics resin manufacturing, which makes the plastics powders and granules that eventually become washing bowls, ice-cream cartons, fashionable furniture or Christmas toys. It comprises a very important part of the country's chemical industry, accounting in 1969 for around £415m. worth of production, which is equivalent to 13 per cent. of total chemical output. Year in, year out, plastics resin production has grown by 10-15 per cent. with the high fliers among the thermoplastics, such as polypropylene, rising by 25 per cent. or more. In 1970 total resin production only rose 9 per cent., a disappointing performance when set against the 12 per cent. widely forecast during 1969.

Optimistic forecast

Disappointment in 1970 has turned to disillusionment in 1971. During the second quarter of the current year, DTI figures

show that output of thermoplastic and thermosetting resins actually fell by 4 per cent. in volume compared with a year before. Few in the plastics industry could recall anything comparable. It has become a bitter pill to swallow, since U.K. demand is still advancing, although at a very modest overall pace of 1 or 2 per cent. the balance is being taken up by a substantial increase in imports especially in low density

companies have searched for profit prospects so muddy that the group would do better spending its money elsewhere.

The plastics division of Imperial Chemical Industries, for example, is in the midst of plans which will cut its white-collar workforce by 535 over 12 months, a reduction of one-eighth. In September, Shell Chemicals revealed plans to cut its staff at Carrington, where it makes a variety of plastics and

which they labour compared with their foreign competitors. Their main complaint is that U.K. tariffs on plastics resins are far lower than those of the Common Market. This has made it much easier for Continental companies with over-supply problems to offload a part of their output in the U.K. market than for British companies to do the reverse. For most plastics the present U.K. tariff is 10 per cent., while the EEC's common external tariff stands at 16 per cent.

The big chemical companies next to decide that the game is not worth the candle and withdraw from one of the major

consulted. Both the importers and the plastics moulders, traders and fabricators (who actually make finished products from the resins) have expressed their dissatisfaction with this trend towards protectionism.

The signs are that the Government has tentatively made its mind on the matter. It has decided that plastics should go up on some or all of the products, it faces the task of translating intention into action. The EEC Commission in Brussels would, a matter of courtesy, have to be informed and the necessary legislation prepared for British Parliament.

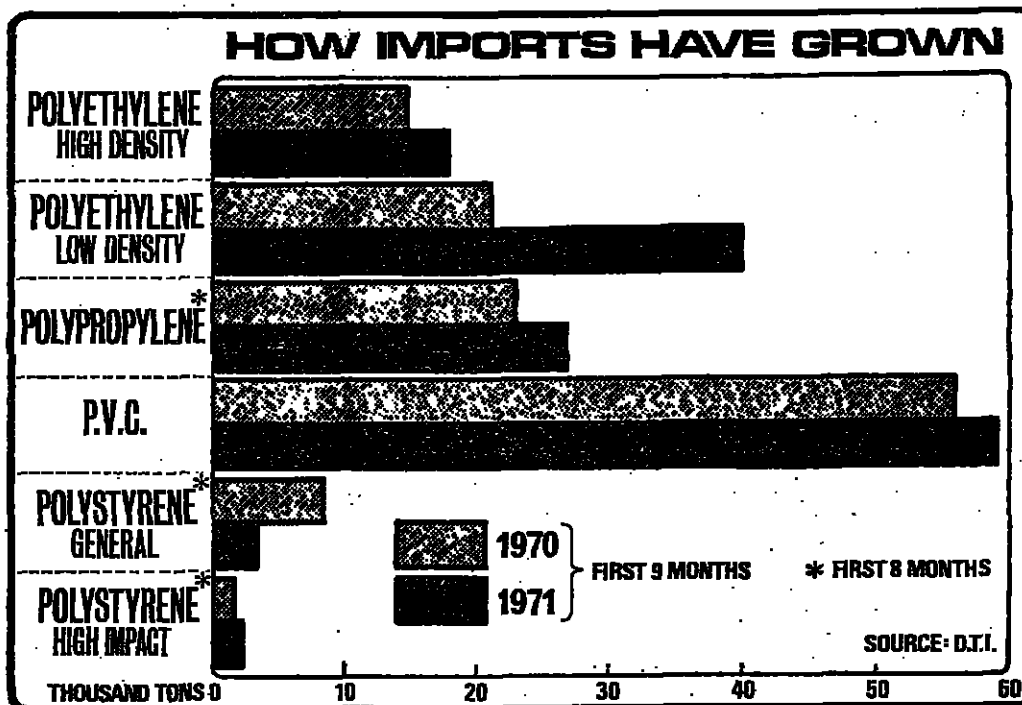
Action before last Thursday vote was probably unacceptable to the Government on political grounds. But the plastics industry's leaders are looking for a decision before the end of the year. In their view a decision to raise tariffs on or after January 1 next year would be too late because tariffs operative on that date will be used as the basis for U.K. alignment with EEC tariff system.

If the requested tariffs are introduced before the end of the year, the U.K. would immediately have the same external tariffs as the EEC on most of the important plastics materials. It would then only have to adjust its tariffs towards six as the process of alignment goes under way in 1973.

Operating in the EEC

The companies that have this application to the DTI all international manufacture in their own right. In chosen areas of the plastics industry, they all operate within the Common Market: ICI in Holland and in France; Shell in Holland, Germany and France; UCB in Belgium and France; Carbide and Monsanto in Belgium. Other things being equal they prefer to build their plants in large markets protected by relatively high tariffs. With profit margins as fine as they are at present, a few per cent. on the tariff can make all the difference between flood and a trickle of low-price imports.

If the DTI rejects the application, the plastic makers say they will be driven to placing more of their investment on the Continent. "Money is more mobile than man," says one ICI manager, "and when we expand France we won't be shipping Teessiders to man the plant."



Imports take the growth

Import figures for the major thermoplastics this year bear out the general contention that the U.K. is proving an increasingly attractive and easily penetrated market for American and Continental plastics manufacturers. With the sole exception of polystyrene (where an error in last year's import statistics is believed to have inflated the quoted figure), imports this year are appreciably up on 1970 levels. The general pattern is that imported plastics are taking most, if not all, of any growth in the British market.

The British manufacturers argue that this only goes to show that they do not enjoy as much tariff protection as their Continental counterparts. Against this, the Common Market producers can point out that they have to contend with no tariff protection at all from manufacturers based elsewhere in the EEC: they may be protected from outside, but not at all from within.

A delicate task

Last March the British companies, through the Chemical Industries' Association and the British Plastics Federation, sought to get the present U.K. tariffs on eight major groups of plastics raised to the EEC's common external tariff which was in every case higher. No action was requested on other products for which U.K. tariffs were higher than those applied by the Common Market.

The months have ticked by without any ruling from Whitehall on the case. True, it is known that one group of products, the alkylid resins, have been dropped from the application, but the fate of the other seven—including all those shown in the chart—still hang in the balance.

Interested parties have been

Dramatic instances

Action has not stopped at closing plant and laying off people. There are one or two dramatic instances of companies actually pulling out of a complete range of plastics because the margins are so poor. Last year the American company, Dow Chemical, took the bull by the horns and stopped making PVC, in which it had a very large investment. The management argued that the research and development expenditure needed to maintain the company among the technical leaders (a sine qua non for decent profit margins in these days of over-capacity) was so great and the

other chemicals. It also plans to close one of its older plastics plants as soon as alternative supplies become available. When this happens, probably towards the end of 1972, the company will have no British manufacturing capacity (at least temporarily) for making a key plastics raw material, high-density polyethylene.

Slowing down the rate of new investment is another weapon being widely used: Shell Chemicals' decision to spread its Carrington and Stanlow expansion plans over a further two years was the most publicised example. To ICI's plastics division the solution appears to be to authorise less future expenditure while pressing on with existing projects. The major project in the pipeline at present, a 50,000-ton-a-year polyethylene plant at Wilton, Teesside, will be ready early in 1973.

All these measures, while doubtless beneficial in the long run, do little to resolve the present-day problem, which is one of over-supply world-wide. But, whereas in other sectors of the chemical industry managers accept their present problems as part of world-wide difficulties, the plastics raw material makers speak openly about the disadvantages under

MEN AND MATTERS

A man of taste to head Brooke Bond

After 100 years, Brooke Bond (now Brooke Bond Liebig) is to get its first non-family chairman. Brookes have followed each other, father and son, but now Mr. John Brooke, grandson of the founder, is retiring at the end of the year, and his place as chairman is being taken, not by his cousin, Mr. David Brooke, who is deputy chairman, but by another deputy chairman, Sir Humphrey Prideaux. Prideaux is still best known to the outside world as the former managing director and still chairman of the NAAFI. But he came into Brooke Bond Liebig via the Liebig half of the merger, and became one of three deputy chairmen of the merged company, with responsibility for personnel matters.

Prideaux sees his new function as "co-ordinating central strategy and choosing the right managers to run the profit-making companies—a sort of management development." Brooke Bond has a non-executive Board, each member having both a functional and a geographical field of concern, in a manner that recalls ICI. "It is our function to direct, and the operating companies' function to manage," says Prideaux, who will be keeping on his NAAFI work, though "not indefinitely."

Prideaux has had a fascinating career. After Eton, Oxford, the cavalry in India and the war, he became Commandant of the School of Military Administration, and as a Colonel, seemed cut out for high military rank. Then, in 1953, he left to become manager of the

NAAFI personnel department. Having risen to the top of the NAAFI, he did a great deal to modernise it. Then came Liebig. Still a keen rider, Prideaux, according to the NAAFI journal some years ago, "believes profoundly that the world started to go wrong when man forsook the horse. . . . By taste and inclination he belongs to the upper-class England of the Georges. Good talk and good wine remain among his greatest pleasures."

Past honour for futurologist

It is ironic that Professor Dennis Gabor has had to wait over 20 years to get a Nobel Prize for something he thought of in the late 1940s. But Gabor, perhaps Britain's greatest living inventor, had to wait most of that time for the invention of the laser to make his invention, holography, a practical proposition. In the meantime, he had got involved in all sorts of other things, like flat-screen TV tubes, electron optics, communications theory, and technological forecasting—his book "Inventing the Future" made him one of the best known "futuresologists."

Gabor was born in Budapest, one of a large number of brilliant men produced by Hungary at that period. Educated in Berlin, he worked for Siemens in Germany, returned to Hungary just after Hitler came to power, but finding little to do there, came to England in 1934, and worked for British Thomson-Houston. The idea for holography (photography without lenses) came to him, he says,

while watching tennis after the war. When U.S. scientists at Ann Arbor retrieved his idea years after and made it work with lasers, they paid handsome tribute to his idea, and this recognised his own interest. By the time he retired in 1967 (he was professor of applied electron optics at Imperial College) holography was showing signs of becoming big business, at least in the U.S.

Now, at 71, Gabor (no relation to Zsa-Zsa) is a part-time staff scientist at the CBS laboratories at Stamford, Connecticut, spending his winters working on such applications as hologram cassettes and three-dimensional TV. The summers he spends in Anzio. The interest is whether his other ideas, like flat-screen and 3D TV, will eventually win through to wide use, as holography has done.

New blood for Shepperton

The story of how the Eckart family of Leeds (whose company Star Associated Holdings has made the reverse takeover bid for British Lion) came to be making £1.5m. a year in profit from bingo, cinemas, discotheques, film production, a pub in Paris and a stake in Trident TV, goes like this.

The father, Walter Eckart, was a toy importer who bought his first cinema in Castleford "as a giggle," according to his son Derek Eckart. The cinema owner wanted to raise money in a hurry, so let the lease go cheaply to Eckart and a colleague. Two years later, the colleague decided that he too wanted to get out, so there father Eckart was, running a cinema.

Eckart built up a chain of cinemas, then started to run ice rinks (which were later sold to Mecca), then went into bingo.

The business is now run by the two sons, Derek Eckart, 44, and Rodney Eckart, 35, joint managing directors. There is no chairman (British Lion's Lord Goodman will have the job if the merger goes through) and only one other director. The question is whether this team can really achieve something which others have tried and failed, namely keep up a steady level of film production at Shepperton studios.

The Eckarts are already in film production. Two years ago they financed an X feature called Baby Love, and now have £1m. invested in three "family" movies. "The world film market is expanding," says Derek Eckart, a sentiment which not all Wardour Street would endorse. But he has in mind TV in the developing countries and new forms of "dial-a-film" TV systems, as much as films to fill cinemas. But a captive cinema chain (Star owns 107), some new blood, optimism, and cash, might make Shepperton at least look busy again.

Unisex

A trendy young couple present themselves at church to get married. They are virtually indistinguishable one from another, both with long hair, flared trousers, boyish figures. The vicar is nonplussed. Which is the man? Eventually, he asks, hesitantly: "Er, which of you has a menstrual cycle?" "Actually, we both have Hondas."

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Observer

SICHEL'S BLUE NUN. ENTERTAINS—RIGHT THROUGH THE MEAL

TELECOMMUNICATIONS

FINANCIAL TIMES SURVEY

Post Office makes up its mind

by DAVID FISHLOCK, Science Editor



Trunk switching centre at Reading.

consulted. Both the plastic and the metal are actually made from the same resin, but the plastic is more resistant to moisture and is therefore more suitable for use in the Post Office's new system.

The signs are that the Post Office is determined to make a decision on the new system by the end of the year. The Post Office's decision is based on a number of factors, including the need for a more reliable and efficient system, and the fact that the new system is more cost-effective than the old one.

From the Post Office's standpoint, the new system is a major step forward. It will allow the Post Office to handle a much larger volume of calls, and it will also be more reliable than the old system. The new system is also more cost-effective, as it will require less maintenance and will be easier to operate.

The Post Office's decision is based on a number of factors, including the need for a more reliable and efficient system, and the fact that the new system is more cost-effective than the old one. The new system is also more cost-effective, as it will require less maintenance and will be easier to operate.

Operating the new system will be a major task for the Post Office. It will require a large number of staff, and it will also require a significant investment in equipment. However, the Post Office believes that the benefits of the new system will far outweigh the costs.

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despite the Post Office's declared interest in the computer-controlled exchange for the future. First, it is designed to be extended extremely readily, to meet the "exploding" demand from subscribers. Secondly, the security of the system is spread throughout the exchange, not centralised as it probably would be in a computer-based system.

This means that the new exchange, "falls safe" like Strouger, with which it must live for a decade at least, and not catastrophically as systems using stored program control have tended to do. The third reason is its maintainability, and the ease with which failure situations can be recognised in good time.

A more advanced system, despite manufacturers' claims, would have meant another three years' delay, the Post Office believes, and the capital cost would be bound to be high. "We could be criticised for being relatively conventional," admits Mr. Fennessy, "but it is very secure, and it offers us the scope we need for our new services."

An initial order, worth £15m., has been placed by the Post Office with Standard Telephones for the completion of development and the first production run of 18 exchanges over the next three years of the TXE 4 electronic switching system. But the Post Office retains the right to go out to tender. "It is the first time we have been able to buy a modern standard system competitively," says Mr. Fennessy.

Development work The first TXE 4 exchange will come "on-line" early in 1975, by which time it is hoped the whole industry will have swung into production with the all-electronic system. It means major changes for industry from the predominantly metal-cutting and metal-forming techniques needed for electro-mechanical switching systems, forecast for all nationalised

industries. For those interested in such facts, this figure represents a spending rate of more than £1,000 a minute, 24 hours a day, seven days a week, for the next five years.

The investment planned by the Post Office is discussed in an accompanying article on this page. But some idea of the size of the manufacturing problem can be gauged from the fact that for the next five years the Post Office expects to spend about £125m. a year on new switching equipment of all three kinds. About half of this investment will be adding to the how fast the new system will replace Strouger, and when it will begin to replace the cross-bar system in large local exchanges—the "profile of obsolescence," as the Post Office calls it—will be determined by the next year's development work on TXE 4.

But one thing is clear. The Post Office would like to see this profile rising steeply; the steeper the better. A survey worldwide has convinced it of the close correlation between standardisation of a telephone system and low running cost, but it knows it will take the industry the rest of this decade to swing into full-scale production of electronic switching.

Trunks, although expanding more rapidly than local calls, will be how to manufacture the system in the quantities and to the standards required. These are areas in which the manufacturing companies have encountered many problems, Post Office expects to place a development contract for the first digital trunk exchange. By

1977-78, it should have ready the counterpart of TXE 4 for trunk exchanges. It will take that long, suggests Prof. Merriman, to get the bugs out of stored program control. Not the least of the problems will be how to manufacture the system in the quantities and to the standards required. These are areas in which the manufacturing companies have encountered many problems, Post Office expects to place a development contract for the first digital trunk exchange. By

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Upsurge in user demand

By COLIN JONES

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the steepest part of that curve. Whereas the number of telephones grew by about 4 per cent a year in the 1950s and by about 6.7 per cent a year in the 1960s, the annual rate of increase is now nearer 9 per cent. By the end of this decade, the Post Office reckons that at least two-thirds of all homes will possess a telephone. Last year, the first of the decade, the ratio was about one home in three—or some 6m. homes in all.

Rising incomes and the different attitude of today's youth towards the telephone are part of the explanation. Plus the fact that, after a certain point has been reached, the upsurge becomes almost self-perpetuating—as, for example, with TV sets back in the 1950s. Once enough people can claim to have a telephone, then most others feel almost compelled to follow poses.

Indeed, in some ways the upsurge can be positively embarrassing to the Post Office. First of all, it can be argued that telephone rentals—the cost of being connected to the telephone network—are still too

Certainly, if residential demand for telephones is rising even faster than expected—as now appears to be the case—then there would be a very good case for increasing the

cheap. At their present levels, telephone rentals provide a return on capital of not much more than 6 per cent—in other words, well below the rate of interest the Post Office itself has to pay on capital moneys borrowed for investment purposes.

Continued on next page

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Business will benefit

The nation's business community is looking forward to far more and better telecommunications. More telex and telephone lines will be needed. Data processing terminals will be common, linking office to computer, and inevitably, computer will talk to computer across the world.

This is the background to some of the developments that the Post Office and companies like BICC are working on now.

Cables are the vital link

Though seldom visible, a cable circuit is always present, and the demand will grow for more and better underground cables—the arteries of telecommunications. In 1938 it took 50 tons of copper to provide a trunk circuit to link two subscribers 100 miles apart; today it takes less than 1 lb. This is the sort of progress and innovation that is helping the Post Office to improve these vital services to the community and is typical of the innovations pioneered today by BICC.

BICC developments improve reliability, reduce costs, and above all, make it possible for you to enjoy the advantages of an expanding telecommunications network much sooner.

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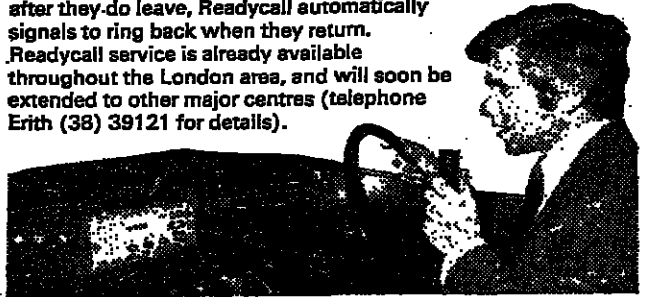
The big battalions know Burndept

because some of the UK's largest organisations are among the largest users of Burndept products, from mobile radiotelephones to advanced test instrumentation. Organisations like the Atomic Energy Authority, the BBC, British European Airways, British Steel Corporation, Richard Costain, Dunlop, EMI, Granada Television, Ifford, Imperial Chemical Industries, John Laing, London Electricity Board, Shell and Standard Telephones and Cables, and more than 35 overseas customers.



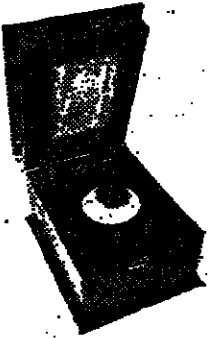
The key executives know Burndept

because Burndept's unique new car-radiotelephone service—Readycall—lets them keep in touch with their offices, clients and other important contacts. Through the Readycall secretarial service, they can make appointments, book hotels and travel arrangements, and so on—without ever leaving their cars. And if someone tries to reach them after they do leave, Readycall automatically signals to ring back when they return. Readycall service is already available throughout the London area, and will soon be extended to other major centres (telephone Erith (39) 39121 for details).



The old-timers know Burndept

because Burndept was the nameplate on the first radios ever sold in this country in the early twenties. And the company that made them was one of the twelve founders of the original British Broadcasting Company (that later became the Corporation). In the thirties, Burndept products also included television sets and radiograms, and during the war—in addition to the military electronics that occupied most of the company's effort there were more than a million Burndept electric cookers too.



It's about time you knew Burndept too

Burndept Electronics (E.R.) Ltd, St. Fidelis Road, Erith, Kent

BURNDEPT—in Radiocommunications from the very start to state-of-the-art

The neighbours know Burndept



because so many of them and their friends have found it a happy place to work—and none more so than Burndept's engineers and technicians. These men and women, responsible for developing some of the most sophisticated radiocommunications systems in the business, like working at Burndept for many reasons, but especially because of the support they get from Burndept's young, go-ahead management team—support that becomes really tangible in areas like test equipment (plenty of advanced 'scopes, sig gens and all the other bits and pieces they need to do a good job).

The rescued know Burndept

because more than 110 of them probably owe their lives to Burndept search and rescue beacons ('SARBE'). These are men whose aircraft have gone down at sea, or in remote territory, and who might not have survived were they not located quickly. Thanks to SARBE, they were located in time. SARBE is a tiny radio transmitter (or transmitter-receiver) that provides continuous transmissions, for long periods of time, on the international distress frequencies, so that rescue teams can quickly pinpoint the survivor's location. There are SARBE models for civil airliners too.



TELECOMMUNICATIONS II

Industry abreast of growing needs

By J. M. PRICE, Chairman, Telecommunications Engineering and Manufacturing Association.

During the early part of the 1960s the telecommunications industry experienced steady growth in requirements for its products. In the telephone switching field these needs were being met with Strowger-type equipment—for although a decision had been taken some 10 years earlier to introduce electronic equipment in place of Strowger, development of newer products had not then been completed.

In mid-1965 the Post Office advised the industry that a dramatic increase had arisen in the requirements for telephone exchange equipment. Although it was recognised that the Strowger system had some shortcomings for modern national network requirements it was the only system available in this country that was in large-scale production.

The industry faced the challenge. Existing factories were expanded, improved manufacturing techniques were adopted and many new factories were built or acquired. In accord with Government policy many of the increased facilities were built in the North-East Scotland, Merseyside and Northern Ireland, areas which in some cases had no traditional experience of the manufacturing processes involved and which therefore placed a corresponding strain on the industry's abilities.

Deliveries to the Post Office of switching equipment doubled between 1966 and 1970 and trebled between 1964 and 1970—a very significant achievement by any standards.

Overseas markets

To assist in meeting the requirements, the industry also agreed with the Post Office that crossbar equipment—which hitherto had been manufactured only for overseas markets, should be for certain applications. Furthermore during the period in question the design of the first reed relay electronic exchange (TXE2), designed to meet requirements of exchanges up to 2,000 lines, had been agreed and manufacture started. This was the first electronic exchange to go into production in Europe and the first of its size range in the world. Since the first exchange was opened in December, 1966, more than 100 have been handed over to the Post Office.



Typical Plessey 5005 Crossbar exchange equipment showing shelves at front and rear hinged down for testing.

Thus it will be appreciated that in addition to problems of growth that had to be overcome the industry had to cope with the unique introduction of major new products.

In addition radical new techniques have been developed for the more efficient use of the existing network. Stored-program control, the on-line electronic processors for setting up telephone calls is now in quantity production for the director exchange network—and London's new sector switching centres.

In other areas there have also been dramatic changes: the introduction of pulse code modulation (PCM) equipment, which has multiplied by a factor of 12 the capacity of existing cable networks; the making available of high-capacity microwave systems exploiting semiconductor techniques for expansion of the national network and the introduction of vastly improved submarine cable systems for international traffic.

With these dramatic increases in growth, industry capacity can now meet the demands of

the Post Office. For the inland service these currently stand at approximately £140m. per annum and this level is expected to rise over the next five years to approximately £155m. a year.

The last few years has seen the coming to an end of the last of the bulk purchasing agreements which for so many years were the method of trading between the Post Office and the industry. The industry has collaborated with the Post Office in such a way as to ensure that there would be no disruption in supplies of equipment during the transition from the agreement to the full introduction of competitive purchase which now applies to most of the Post Office's needs for telecommunications equipment.

Future requirements

For the future the need remains for the Post Office to consult with the industry as a whole on future system requirements for the national network. To provide a means for such consultation the Advisory Group for System Definition (AGSD) was set up, composed of experts from the Post Office and industry.

The group's objective is to develop new concepts for the telecommunications networks of the future, at the same time recognising that there must be a compromise between two conflicting factors: on the one hand there is the ever-increasing pressure to change both the service provided and the techniques employed; on the other hand there is the restraint of the need for compatibility pro-

blem with the existing system which represents a commitment of many millions of pounds, a sum that cannot be ignored. It is probable, therefore, that the demands to be faced by telecommunications industry in the future will be more concerned with its technical skills—expertise in the application and application of and very advanced techniques which are themselves so rapid and continuous change. The current technical developments in both switching and transmission techniques will be significantly affected by decisions to be made by the Office during the next two years. At present the industry is making a big R and D in the field of stored-program control—a computer-based technique used for the functions of switching systems. In the transmission field developments are particularly interesting. A coaxial system with a bandwidth of 18 MHz is being developed fully equipped 18-tube will have a capacity of circuits, far greater than anything else available. It was installed first between London and Birmingham and extended to Manchester afterwards.

Following the successful introduction of PCM (up to 25 miles) junctions between exchanges, the Office wanted feasibility studies to investigate the application of digital transmission techniques on a wider scale. studies and the field exper-

Continued on next page

Demand —(Cont'd)

Continued from previous page Post Office is hoping to encourage greater locutioness. Habits of social reticence seem too deeply ingrained for there to be much chance of the present low intensity of telephone usage altering dramatically or suddenly.

For that would merely mean more borrowings, more investment, less profitability, less self-financing, more borrowings... and so on. In any case, the lead times on telecommunications equipment—for example, new telephone exchanges or their extensions—are such that the rate of build-up in an investment programme of this scale cannot be readily adjusted to short-term fluctuations. For this reason, too, there are grounds for trying through tariff policy to keep the growth in demand broadly in line with budget forecasts.

Service quality

Existing subscribers will be glad to know that broadly only about half the £2,700m. programme will go on expansion. The rest will be devoted to replacement of existing equipment and improvements in the quality of the service. As a result, the Post Office is confident of being able to eliminate congestion and interference—frustrated calls, through plant undercapacity—within the next few years.

This brave commitment is, of course, vulnerable to the accuracy of the latest forecasts of traffic growth—10 per cent. a year for local calls, 11 per cent. a year for trunk calls, 15.5 per cent. for Continental traffic, and 22.5 per cent. a year for inter-continental calls. Since the number of telephones and exchange connections is expected to rise by about 9 per cent. a year, these forecasts obviously assume no vast change in British telephoning habits.

With an average calling rate of less than two conversations per day per telephone (business as well as residential), Britain is one of the more "silent" telephone-using nations. Telephone usage in the U.S. and Scandinavia is twice as high. By off-peak tariff cuts and by promotion—"Someone, somewhere, is waiting for your call"—the

Good news travels fast.



This morning's new arrival has visitors. The good news was relayed to friends and neighbours locally. To relations holidaying in Italy. To Auntie in Sydney. To Grannie in Littlehampton. All before lunch.

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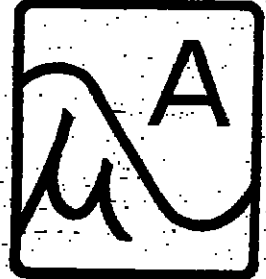
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Widening the range of new services

By RON MARTIN, Marketing Director, Post Office Telecommunications

The profitability—often, indeed, the survival—of a business is critically dependent on marketing new and improved products to anticipate changing customer needs. In the Post Office telecommunications business we do not see profits for our future development, nor are we uninterested in survival, but our main driving force to innovation in products and services is a deep-rooted sense of responsibility towards our customers. Our aim is to give our customers the best communications services that we can and a choice of equipment and services wide enough to meet all reasonable needs (and even some unreasonable ones).

The balance of innovation and quality of service is important. Every new service, every new facility, added to a public telecommunications system must work harmoniously and efficiently with the rest of the highly complex network and high standards of performance and reliability must be maintained and improved upon. This means selectivity in weeding-out the unworkable and the gimmicky and a lot of painstaking and time-consuming research, development and testing before new products or services are introduced. A short article like this cannot do justice to all that has been achieved in recent years or all that is in the pipeline for the future, but I shall describe briefly some of the more significant recent and forthcoming developments.

Switchboard systems

The communications nerve-centre of any business is its switchboard. The very largest automatic switchboards are tailor-made by Post Office approved suppliers to individual customer requirements. In the past, choice was limited to two basic systems rigidly specified by the Post Office. In recent years however we have been encouraging the development of new systems by both old and new suppliers. The effect is beginning to be felt in a significant widening of the range of choice available to customers for these large and sophisticated installations. There is more in the pipeline of rigorous evaluation and testing which precedes Post Office approval.

The vast majority of business customers, however, can meet all their needs for either automatic or manual systems. In recent years we have both extended our range of automatic switchboards up to 100-extension capacity, and added models for the small business which dispense with a special operator for incoming calls and route them to an ordinary telephone extension, hence they can be re-directed as necessary. The trend to automatic working, so much more efficient for internal calls, is strong but for those who prefer the personal service of a manual system we now have an attractively-styled modern range of the old mahogany box on the wall (isn't it!) and, for the business too small for a switchboard operator, the self-service eyemaster range which gives up to ten extensions.

Control of their own internal and external calls, switchboard design does not stand still and we are ready looking to the next generation. Switchboards need telephones. Telephones, hitherto, have been dials—but not for much longer. Already some 12,000 Post Office Keyphones are in use on extensions on the larger types of automatic switchboard.

throughout the U.K. The Keyphone, in which a pad of push-buttons replaces the dial, is vastly more convenient to use. You can press the buttons as fast as you like and get that long telephone number out of your own memory and into the built-in memory of the telephone in the minimum of time. As a bonus it offers, for the more distant future, the possibility of faster set-up time for calls as faster-switching types of exchanges enter the system and the potentiality of sending digital signals to distant computers.

The Post Office has played a prominent part in the development of international standards and techniques for Keyphone working. At present Keyphone working is confined to extensions on large private automatic exchanges which have to be equipped with special apparatus to decode the Keyphone signals but the aim is Keyphones which can be used anywhere. Next year the Post Office, which has pioneered new developments in collaboration with the British telecommunications industry, will make a breakthrough with a public trial of a new type of Keyphone which can be used as a direct replacement for a dial telephone.

The Keyphone remembers the number that you have keyed into it while it is "dialling" it out. It has an electronic short-term memory. But we have introduced electronic long-term memories for lists of telephone numbers too. The Tape Callmaker, now generally available from the Post Office, enables you to pre-record up to 400 different telephone numbers—for automatic in-house, inland or overseas calls—and to select from a visible tape record any one of them to be "dialled" automatically at the touch of a button.

Future variants on this theme will be the Card-Callmaker (becoming available from next year), in which telephone numbers are simply recorded on small plastic cards that are dropped into a slot as required to make a call, and the Key-Callmaker. The Key-Callmaker, which offers separate labelled buttons for each of up to 32 pre-recorded numbers and a built-in loudspeaker to monitor the progress of a call without having to hold a telephone handset, is perhaps the ultimate in call-making mechanisation. Its design is still being refined, though a number are already in service.

Radio receiver

However efficient a telephone installation may be, there are obvious difficulties in contacting somebody who is on the move. In-house staff-location systems have been in vogue for many years, with a continuous flow of new products offering new facilities or coverage. We believe, however, that there is a real need for a national system, which would enable any subscriber to be alerted anywhere in the country by simply dialling a code from any telephone which would sound off the alarm in a miniature radio receiver carried in his pocket. He could then call his office or home from any convenient telephone. We are currently searching and developing such a possible radiopaging system.

All the foregoing has dealt with sound communications only. Vision adds a new dimension. Transmitting vision as part of an ordinary telephone call economically is, technically, a formidable problem but experiments using Viewphones,

which give a head-and-shoulders portrait of the person at the other end of a call, are continuing. Before the end of this decade we are likely to see this facility available on in-house installations, but a public switched service is likely to be a matter for the '80s.

Here to-day though is Confravision, a vision conference facility of greater value than simply seeing one man at the other end of the line. Confravision is the first public inter-city conference service of its kind in the world, providing both voice and vision facilities between any two purpose-built Boardroom quality studios in Birmingham, Bristol, Glasgow, London and Manchester. Meetings between two groups of up to 10 people, with five in camera shot, take place in complete privacy without intrusion, because the minimal

operations required are customer-controlled within the studio. The television screens in front of each group ensure personal involvement throughout and produce the atmosphere of a face-to-face conference. As a conference aid, a special camera allows projection of pictures of advertising display material, articles of equipment, or diagrams to be transmitted to the distant end.

The service, which costs between £120-£180 per hour according to distance, is designed to meet the needs of businessmen by reducing their travel commitments, absence from office with consequent loss of productivity, fatigue, etc. Alternatively it allows the gathering of people together at short notice for a conference with minimum inconvenience and maximum benefit. Confravision is our newest service and to introduce it initial one-hour sessions are currently being offered at a nominal fee of £20 only.

Data transmission is a growing "must" for the computer-oriented business. The number and type of data services grow continuously. On their way are a 2400 bits per second service on the public telephone system and 4800 bits per second service for use on point-to-point circuits. Development of a new low cost unidirectional service for telemetry purposes is progressing. This will allow measurement of levels of water, gas, electricity, petrol, etc. to be obtained from distant premises. The service could also be used for environmental control, that is, flood warning, pollution, etc. and will become available during 1972.



General view of the Post Office Confravision studio, Euston Tower, London.

The new Dataplex Service enables Datel users in a particular area to access a remote computer for a local call fee. Further similar services will follow shortly offering greater flexibility in terminal speeds. Studies for a possible new digital data network are well advanced. Users and manufacturers are assisting in the finalisation of required facilities.

To finish on a more human note, not all our development of new facilities and services is for the ordinary user. Many people suffer from physical disabilities and handicaps which make use of a normal telephone difficult or impossible—yet their need may be great. We have a field and, true to our objective range of devices to meet a variety of these problems, from amplifying telephones for the engineers, to meet them.



Party Line

There's a party tonight. This morning, nobody knew about it. Tonight, they'll all be there.

And all it took was a lunch-hour, a phone-box and a dozen or so of the ten thousand million phone calls we make every year in Britain.

Ten thousand million calls. Many of them STD, faster than they were forty years ago, yet actually cheaper. Many of them calls to countries overseas, dialled straight

through without fuss. And the odds are they're made on Plessey telephones, routed through Plessey exchanges.

The Post Office Corporation in Britain and comparable authorities overseas run this global network—but industrial companies make it and install it.

Plessey is one of the largest telecommunications manufacturers in the world. It makes, for example, the telephones and the switchboards the subscriber sees—

and the far larger volume of equipment normally hidden within the world's telephone exchanges. More than this, Plessey makes systems which transmit business data, link computers, serve the exploding demand for communication in every facet of life in the 70's.

That's why Plessey is a major international force in telecommunications.



PLESSEY
TELECOMMUNICATIONS

Industry

—(Cont'd)

Continued from previous page

the experimental equipments to which they will lead, will pave the way for digital transmission systems that can be expected to be linked into long-distance networks about the end of the 1970s.

In the meantime, another development is in hand to produce new radio-relay link to transmit digital signals over the extensive microwave network linking the existing analogue and feeder systems. Industrial combines, banking and insurance groups are among the organisations that are setting up computer networks at demand an interchange of information, either between a number of computers at different locations, or between a number of terminals working to a large central computer.

Fast growing demands for the transmission of digital signals in addition to computer data at present include telegraph and telex signals, have led to this current development to provide a digital radio link that can be overlaid on

to the existing microwave network. This will provide valuable experience in the operation of a digital transmission system.

The Post Office are planning to formulate a design specification for a digital data exchange in 1972, and then place a development contract with the industry. After testing and evaluating a prototype, it is hoped that production orders for at least the first seven exchanges would be placed for installation in 1977.

In the transmission field developments will continue with evermore sophisticated microwave radio and cable bearer systems. The introduction of waveguides and fibre optic media is some ten years away; however, experiments have started on these new techniques which have an enormous capacity—at least 250,000 telephone calls and possibly three times as many.

It is clear then that there is going to be massive demands on the industry's technological skills. The industry has no doubt that it will meet these demands.

LTD.

TELECOMMUNICATIONS IV

Britain maintains strong position overseas

By ROGER WOOLNOUGH, Editor, Electronics Weekly

Britain's telecommunications industry has held a strong position in overseas markets for a long time, despite circumstances which suggest that this country might be at a disadvantage as an exporter.

Neither the telephone itself nor the Strowger automatic exchange was invented in Britain. For 50 years, under the bulk supply agreements, U.K. manufacturers had a protected home market which could have led them to be uncompetitive in the outside world. And as a nation, the U.K. has never been particularly telephone-conscious.

It is true that to-day Britain ranks third in the world in numbers of phones installed at about 14m., but it is a poor third after Japan's 23m. and the U.S.'s 115m. In terms of phones per 100 population, the U.K. comes ninth after such countries as Sweden, Switzerland, New Zealand and Australia. (The U.S. is top, with 56.38 phones per 100 population; in Washington, DC, there are more phones than people.)

Despite all this, British telecommunications manufacturers have been able to secure and maintain a strong foothold overseas. In 1970 they exported equipment worth over £38m. with deliveries to the home market being valued at around £210m.

This export success has been very largely due to the strong links with the Commonwealth. Last year deliveries to these countries, plus South Africa and the Irish Republic, totalled nearly £23m.

The high degree of compatibility between telecommunications systems in the U.K. and Commonwealth countries makes it probable that British manufacturers will be able to go on regarding these overseas territories as extensions of the home market. Formal collaboration is fostered by the Commonwealth Telecommunications Council, which took over from the Commonwealth Telecommunications Board two years ago, when it had been recognised that the increasing size and complexity of

modern telecommunications systems and the rate of growth of new services called for new consultative and joint financial arrangements.

Over the past 10 to 15 years a whole series of new ideas and fresh needs has disturbed the field of telecommunications, which, since the British Post Office adopted Strowger switching in 1922, had been relatively placid.

It began to be recognised that electromechanical switching of the Strowger type was becoming obsolescent about 1950. In transmission, the use of pulse-code-modulation (PCM) became practical, for while this technique had been invented in Britain in the 1930s, it did not become feasible in hardware terms until the arrival of the transistor after the war.

Ground stations

Satellites created a completely new technology of long-distance communications, calling not only for launching capability and a capacity to design and build the satellites themselves, but also demanding the construction and running of ground stations.

The development of the computer, and its rapid acceptance in business and industry, has led to the demand for data transmission circuits, sometimes between towns and cities, sometimes spanning oceans.

The opportunities for U.K. manufacturers to export depends in the first place on whether or not the British Post Office is engaged in the full range of new telecommunications activities. British equipment manufacturers would find it extremely difficult to export systems which were not being used in the U.K., partly because the cost of development would be high, and partly because overseas customers are more likely to be convinced they are buying the right system if they can see it actually in use.

One exception to this was the Plessey group's private venture development of a crossbar exchange system, which they undertook purely for the export market before the British Post Office

reversed its decision not to install crossbar. As it happened, the U.K. move to crossbar came before Plessey had fully tried the strength of their system on the world market, so there is no conclusive evidence about how it would have fared with no home sales to back it up.

Although U.K. users complain about the telephone service, and there may be criticisms about the speed with which new equipment is introduced, the fact is that the Post Office is using or investigating virtually the full range of telecommunications technology. On switching, the decision to move straight from electromechanical to fully electronic exchanges was so far-reaching that many overseas telecommunications authorities and manufacturers thought it foolhardy—a judgment which, in the event, proved accurate.

The electronic exchange proved too big a single step, and the U.K. is now installing a mixture of Strowger, crossbar and electronic exchanges. The cost per line of electronic exchanges is still too high to attract business from abroad, but the chequered history of this part of British telecommunications policy could yet have a happy ending. British manufacturers have acquired an immense amount of knowledge of electronic switching, and this should pay off in overseas orders when the time is ripe.

The other important area of switching is stored program control, which exploits computer concepts and demands expertise in software as much as in hardware. In the U.S., stored program control exchanges have been installed in public service. In Britain this technique is still at the development stage, although industrial contracts have been placed.

British transmission technology ranks high in the world, and the Post Office has not been slow in exploiting this capability. Equipment for a large number of PCM transmission links has been ordered, and it is expected that substantial orders will continue to be placed in the future.

In satellite communications,

while Britain has lost her chance of launching her own space vehicles, earth stations have proved one of the outstanding successes of post-war British technology. When the Jodrell Bank giant radio telescope was completed just in time to track the first Sputnik, few people imagined that in a

few years the globe would be circled by systems of communications satellites, and that their signals would be handled on earth by terminals deriving directly from the Jodrell Bank design.

There are now ten British satellite ground stations in use throughout the world, though national telecommunications. Each working day 146,000 telephone calls, 170,000 telex calls and 70,000 telegrams pass through the Post Office's international exchanges in London. This is almost certainly the busiest single international telecommunications centre in the world. (Although more telecommunications business crosses the U.S. frontiers each working day, it is divided among a number of competing companies). In addition, a British company, Cable and Wireless, provides international telecommunications services in 53 countries and separate territories overseas, some of them British dependencies but many of them independent Commonwealth or foreign countries.

Parent body

Communications on this scale are possible because technical standards, operational arrangements and accounting systems have been patiently worked out at international meetings of telecommunications experts. The parent body is the International Telecommunication Union (ITU) founded in 1865 and since 1947 a specialised agency of the United Nations. The ITU has 139 member "administrations," each representing a separate sovereign state. The world's telephone and telegraph companies also enjoy a form of associate member status as

"recognised private operating agencies." The Post Office Corporation, set up in 1969, is the largest as well as one of the most recently joined recognised private operating agencies (as the former General Post Office was, of course, an administrative function now lies with the Ministry of Posts and Telecommunications).

The main framework of international and maritime communications is provided by periodic World Administrative Conferences called by the ITU. The most recent such gathering was the World Administrative Radio Conference on Space Communications which took place in Geneva in June. But the technical and operational details which alone make practical communications possible are worked out in other bodies—in the Working Parties of the Telecommunications and Radio "Consultative Committees" associated with the ITU and in separate regional or specialist organisations such as the Commonwealth Telecommunications Council, the European Conference of Postal and Telecommunications Administrations and INTELSAT (the global satellite communications consortium).

Britain's past history has given her a major role in international telecommunications. The chain of submarine cables making up the Commonwealth system from Britain via Canada, New Zealand, Australia and Hong Kong to Singapore and Malaysia. Foreign technology has been used on a large scale only in the submarine cable systems to the U.S., and even here the value of cable supplied by British manufacturers has always exceeded the Post Office's investment in those systems which are jointly owned by the Post Office and American companies.

The U.S. space programme has inevitably given American manufacturers a head start in the production of communication satellites. British manufacturers have succeeded in obtaining valuable sub-contracts in this area. In addition, Post Office satellite communications experts have throughout played a dominant part, second only to COMSAT, in working out the technical and operational arrangements for the global communications satellite network.

The very rapid growth of business in recent years has produced a formidable problem in the need to achieve large-scale expansion of the international telecommunications system. The effect of the Post Office shopping abroad could be reaching. If it was done on a non-reciprocal basis it could be to destroy the confidence of overseas customers in British manufacturers, and make more difficult for the U.K. export. But if there was some form of reciprocal agreement, British companies could new markets opening to them and there would be a less reliance on the Commonwealth countries as customers.

There could be some dramatic changes of direction within next few years, but the would not be seen immediately. The vast capital investment in telecommunications, and the rapid innovation, and decisions taken determine the turn for years to come.

Links with the world

By JIM HODGSON, Director, External Telecommunications, Post Office Telecommunications

At this moment you can telephone 196 countries and separate territories overseas, send telex messages to 144 and address telegrams to 225. The numbers are still growing. You can also telephone or send telegrams to 9,200 ships at sea. In some cases your call or message will go direct over any one of 28 submarine cables, 27 satellite systems and 74 radio services which link this country to the outside world. In other cases you will be routed via one or more "transit" countries. Your call or message to a ship at sea may go through any one of 12 coast radio stations.

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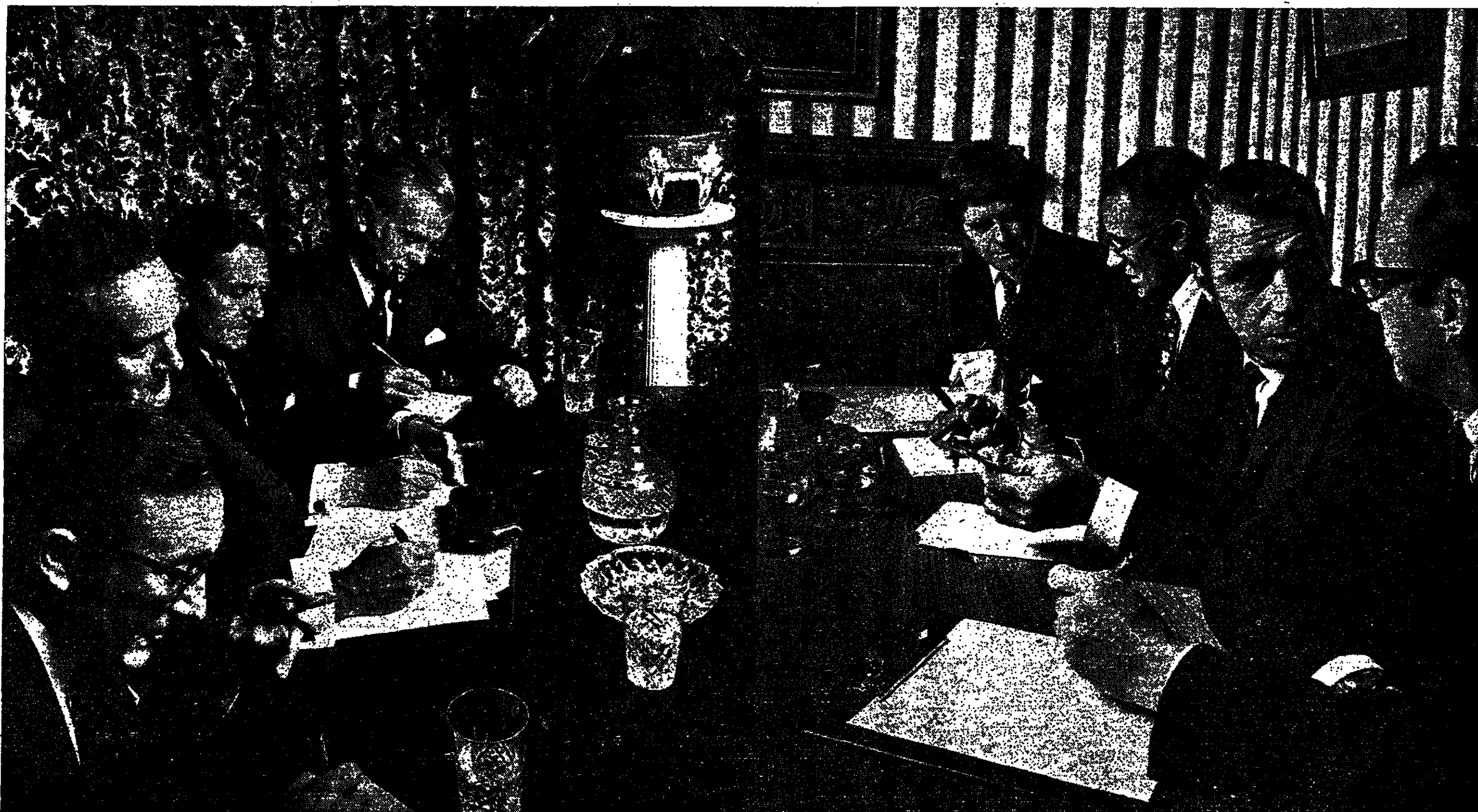
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TELECOMMUNICATIONS V

Long-distance cable and satellite links

ARTHUR MOWATT, Head of International Lines Division, P.O. Telecommunications

The technology has developed the main source of failure of the submarine cables has been due to damage by fishing trawlers as they drag their trawls along the seabed. A great deal of effort has been made to overcome this by publication of charts showing the exact position of the cables and by advice and information to ships' masters. It is hoped, however, that this problem has now been more positively solved by burying cables either by ploughing or by "jetting" them into the seabed to a depth of one to two feet where they cross the fishing grounds. Thus there is competition in reliability between cables and satellites and great efforts have been made in both cases to make them both more reliable.

Nevertheless, no-one can be certain that failures will not occur in the future. Therefore where the traffic stream is large enough to justify having both or even of having several cables and several satellites to serve it, such an arrangement would be preferred to a single link, however great the confidence in its reliability, so that if there should be an interruption of any one of these systems the effect on the service given to the customer would be less serious.

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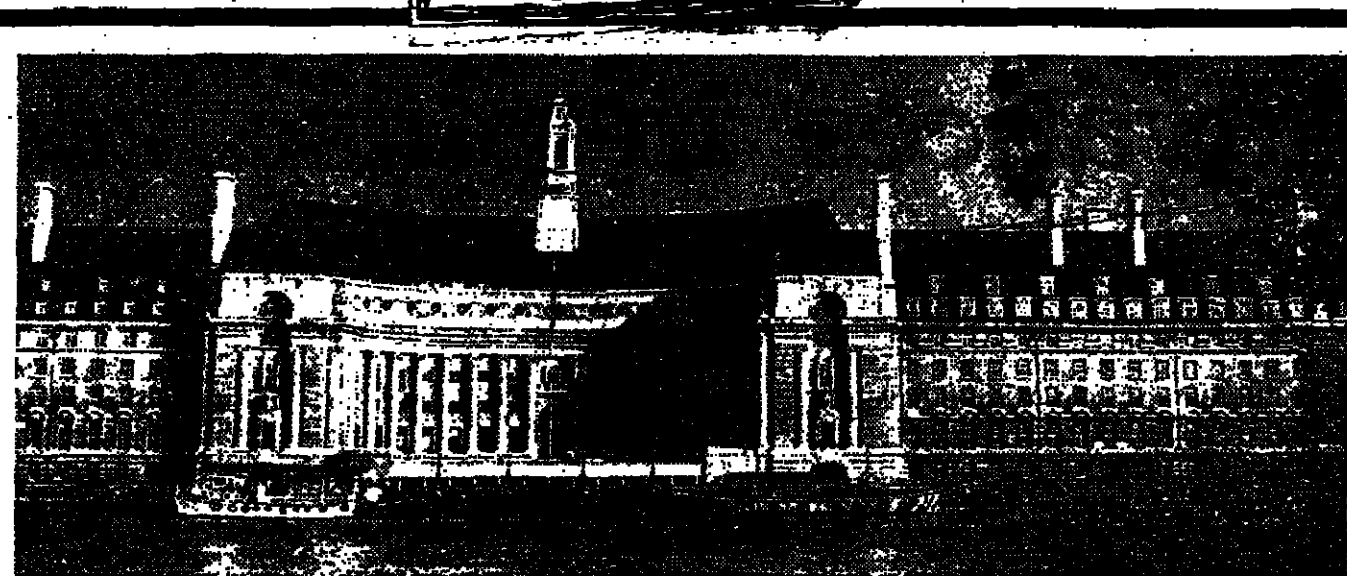
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The role of the computer

JAMES ENSOR

Telecommunications is being of great importance to the use of computers. Some estimates in the U.S. calculate that within three or four years any as 80 per cent of all users in the world will be using computers. There is a rapid explosion in the use of computers, and this is reflected in the growth in demand for telecommunications. The advantages of telecommunications in the use of computers are many. They include the ability to share data, to link remote machines, and to link central processing units. The growth in demand for telecommunications is likely to be enormous in the next few years. This is because of the increasing use of computers in business, industry, and government. The demand for telecommunications is likely to be enormous in the next few years. This is because of the increasing use of computers in business, industry, and government.

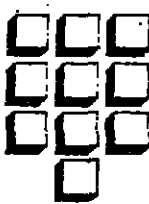
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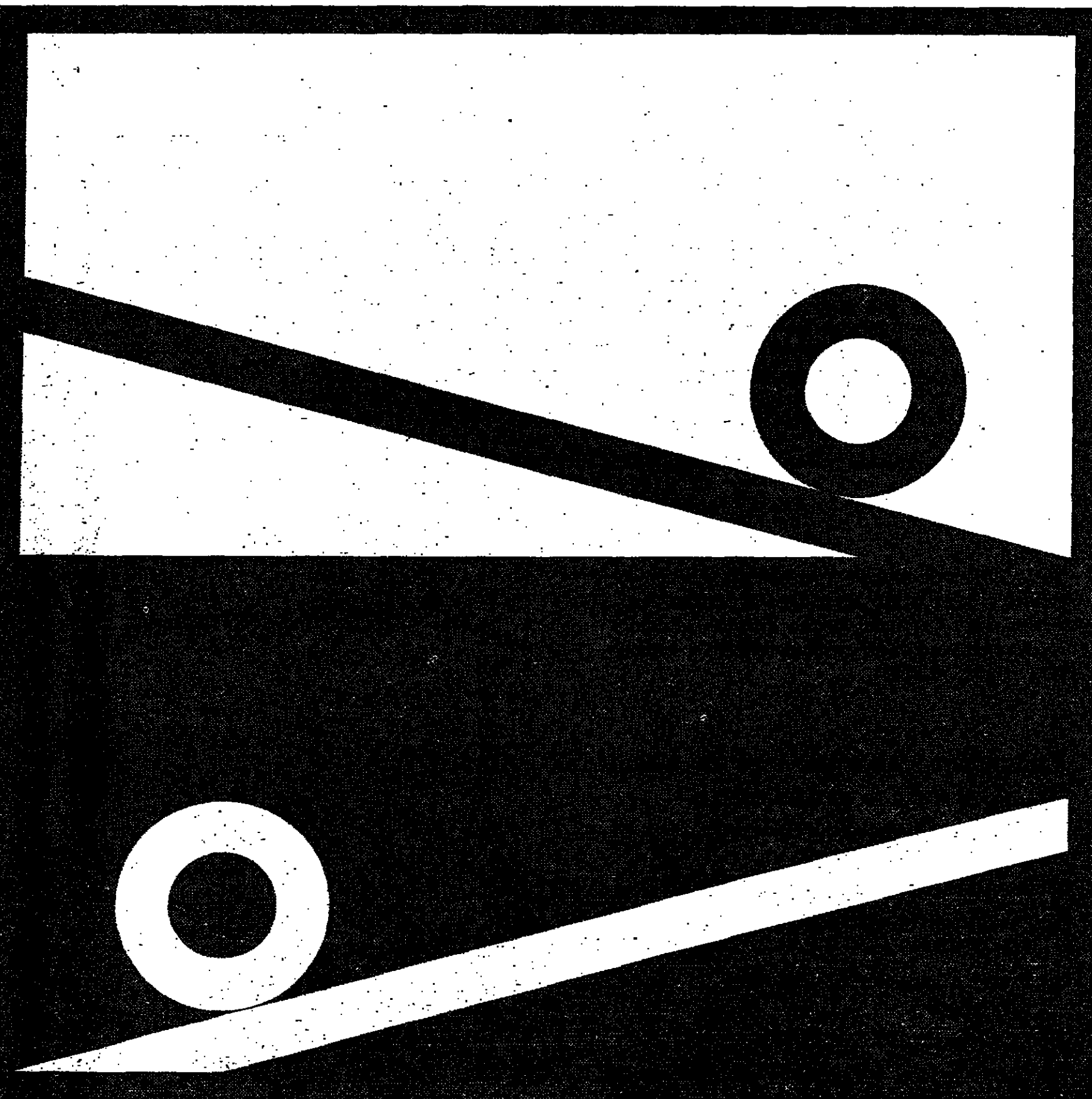


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Continued on next page

TELECOMMUNICATIONS VI

Advances in pulse code modulation techniques

By W. J. BRAY, Director of Research, and M. B. WILLIAMS, Deputy Director, Telecommunications Developments, Post Office

Pulse code modulation digital per second. The groups of techniques are an essential seven pulses define 128 amplitudes to the high-capacity inter-city transmission systems and acceptable quality for tele-switching exchanges that will phony.

More exacting requirements have to be met on long-distance and international circuits, and on those carrying certain non-speech signals, such as multi-channel telephony. Here, 8-bit coding has been standardised modulation (PCM) techniques for general application and will have proved their worth by enabling existing multipair telephone cables to provide 24 or 30 speech circuits on two pairs of wires that hitherto carried only a single conversation—and this without digging up roads to lay more cables.

What then are PCM digital techniques, and what are the advantages that make telecommunication engineers throughout the world increasingly confident of the role of such techniques in the future network? The technique was invented by the late Alec Reeves of Standard Telecommunication Laboratories, in 1937, but its practical application on any large scale had to wait a quarter of a century until transistors became available in quantity and at commercially acceptable prices.

Short-haul systems

In a typical short-haul PCM system, used widely in several countries, speech is transmitted as a train of "on-off" or digital pulses of current, in contrast with the continuously varying amplitude of the original speech waveform. This is accomplished by instantaneously measuring or sampling the amplitude of the original speech wave 8,000 times a second.

Each sample is represented by a group of seven on-off pulses, for example 0101101. Samples of various amplitudes are represented by different combinations of pulses. One additional pulse is added in each group for synchronising the receiving equipment, making eight pulses repeated 8,000 times a second, or 64,000 pulses amplitude.

A secondary, but not unimportant, advantage of PCM is that the performance of digital links can readily be monitored by automatically counting any errors in the pulse rate. Thus an alarm can be given well before the performance has deteriorated to a point affecting signal quality.

Coaxial cables

The ability to transmit many signals on the same path is, of course, available to-day. One method uses coaxial cables and "frequency-division multiplex" methods—akin to the selection of stations by tuning a radio. But it is not easy completely to avoid mutual interference or crosstalk in such systems when analogue signals of different characteristics are simultaneously transmitted. This problem largely disappears if digital techniques are used. It is already clear, for example, that digital techniques are highly desirable for the transmission of Viewphone signals over intercity distances.

New types of PCM digital transmission systems are being studied. Some are already approaching field trial, with a view to meeting the growing traffic demands of the 1980s and beyond. One type of system is based on coaxial cable operating at 120m. bits per second, with a possibility of even higher speeds in the future.

Another is the microwave relay system of similar capacity, operating at frequencies of about 10 and 20 GHz. A third is the waveguide, transmitting digital signals at 500m. bits per second or more on each of several carriers. Further away in the future are optical communication systems, which will also involve digital transmission at high rates.

Microelectronic circuits containing tens or hundreds of circuit elements—transistors, diodes and resistors—hold considerable promise for future PCM systems. We would expect them to be used, for example, to sample and encode signals in PCM digital form. They may

also be used in amplifying, reshaping and retiming the pulse signals when they have been weakened and distorted during transmission.

These devices are already relatively cheap, and will become cheaper as quantities needed increase. For this reason PCM digital transmission promises to be cheaper than analogue transmission.

Looking further ahead, big economies can be expected from the combination of PCM digital transmission with digital switching in exchanges. The experimental PCM digital switching system at the Empress Exchange, Shepherd's Bush—designed and built by the Research Department of the Post Office—has been carrying public traffic for nearly three years, with excellent reliability. A single circuit the size of a matchhead can almost instantaneously switch any of 24 or more telephone conversations. Unlike their electro-mechanical counterparts, microelectronic circuits neither wear out nor need significant maintenance.

The pioneering field trial at Empress is being followed by a trial of a more advanced digital exchange developed by a British manufacturer. For the first time in several decades of exchange development, during which the real cost of switching has remained constant, the possibility now exists of achieving a substantial cost reduction.

Trunk networks

But the potential of PCM digital techniques is by no means confined to transmission and switching in the junction and trunk networks linking exchanges. Studies now in progress in the Post Office Research Department suggest that there may be advantages in taking digital techniques into the local distribution network. This is the part of the network between local exchanges and the customer's premises.

One idea being explored uses a coaxial cable ring main in roadway ducts. PCM digital data communications service, which will provide the time-

ring main to and from the local digital exchange, providing an "electronic highway" with time slots which could be seized when the subscriber required a service. Spare capacity on the ring main would enable stereophonic radio and several high-definition video services, including entertainment television, to be provided in addition to telephone, Viewphone and data services.

Provided enough customers required service, such a system could achieve, by its efficient utilisation of common plant, substantial cost advantages. Furthermore, the superior quality inherent in PCM transmission would become available over virtually the whole path between customers.

The growing importance of PCM digital techniques means that a considerable proportion of Post Office and industry telecommunications research and development effort is being devoted to the new digital



German visitors at the Hewlett-Packard Ltd. plant at Queensferry, Scotland, where a computer is being assembled for the University of Prague.

transmission systems, and to digital switching systems. The latter are envisaged as using computer-like stored programme control.

Other digital studies are trying to improve the encoding efficiency of video and facsimile signals.

The better quality and stability of PCM digital links for transmitting sound and television signals is of considerable interest to the BBC and the ITA. There is close collaboration between the Post Office and the broadcasting authorities on the standards to be used for such purposes in the national trunk network.

Attention is also being given to the possible use of PCM digital techniques for overseas communication via satellites

and submarine cables, where the advantages are similar to those outlined earlier for inland systems.

On the international front the International Telecommunication Union is studying, through its Consultative Committee, the standardisation of the basic parameters of PCM digital systems, in order to facilitate inter-connection between such systems in different countries. These studies provide for a variety of services, including the telephone, data and visual services, and for systems of various capacities.

While there will undoubtedly be further technological advances that will improve conventional frequency-division multiplex analogue transmission techniques and electro-mechanical switching systems, the

overall balance of advantage and potential for the future clearly with PCM digital techniques. This is especially when these techniques are applied in an integrated transmission and switching system. The operational advantages gained by providing a range of audio, data and telecommunication services using a unified PCM digital system, are indeed of great importance.

Alec Reeves could well be proud that his brainchild, 1937, is now universally acknowledged as one of the most important factors in the way for national and international communication networks in the future.

Computer—(Cont'd.)

Continued from previous page

ordinary telephone lines in the past few years does not inspire confidence.

The example of Japan, where telecommunications and data transmission has been a strictly controlled government monopoly is not an encouraging one.

Nippon Telephone and Telegraph has been slow to develop its National Data Communications Service because of its lack of capital resources and appreciation of the rate at which demand would grow. The Government resisted all offers of private capital aid in developing the system so that by the end of last year, only Tokyo and Osaka had facilities for time-sharing networks.

NTT plans to spend almost £200m. over the next three years in establishing its national data communications service, which will provide the time-

sharing computers as well as the data links. This is considerably more than is being spent in Britain over the same period but most experts feel that it will be insufficient to meet demand. Japan has fallen some seven or eight years behind the U.S. in the use of time-sharing systems, mainly because of the slowness of the national service in supplying communications lines and computers.

Britain is unlikely to repeat the mistakes of Japan, if only because the time-sharing services themselves are being developed by specialist companies, often American, and not by a national monopoly. At one stage it appeared that the Labour Government might encourage the formation of a national monopoly for data processing and transmission, but it soon became clear that this was impractical.

Private datacommunications networks are, of course, being established in possible conflict with an eventual national system. British Rail and the clearing banks are already building full national data transmission networks and they are likely to be followed soon by the large utilities such as the Coal Board, Electricity Boards and Gas Council as well as by some large corporations such as ICI, Shell-Mex and BP and some retailing organisations. It has been suggested that these private networks should be allowed and even encouraged to compete with the Post Office, especially if the latter fails to meet the demand for lines.

The bank data-transmission systems, in particular, with their national coverage could, in time, provide a possible alternative method of data communication.

tion to the Post Office. But there is a real danger these competing systems develop into incompatible unworkable systems unless national authority is established with co-ordinating technical development.

Although there are about the rate at which the Office will be able to provide lines, one can have confidence in the prospects for British data-transmission as a whole. Britain has a leading place in Europe as provider of both the core and the communication links required for data transmission networks. That a British system to work successfully in every chance that British firms will be able to valuable business in implementing similar systems on a

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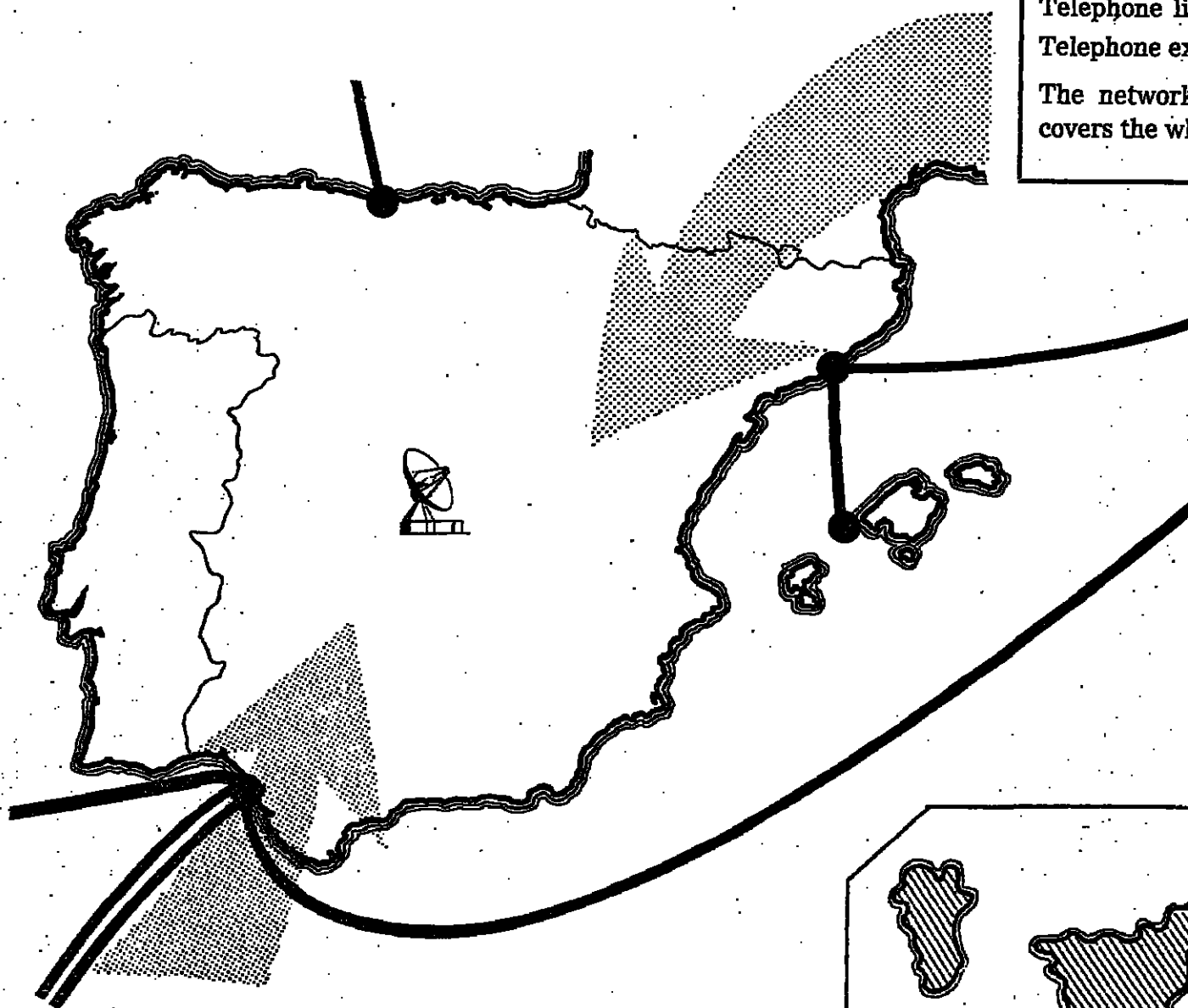
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Submarine cable services in which TELEFONICA participates:

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- Barcelona-Pisa 760 km., 640 circuits.
- Conil-Green Hill (TAT-5) 6,450 km., 720 circuits.
- Estepona-Rome (MAT-1) 1,850 km., 640 circuits.
- Bilbao-London, 897 km., 640 circuits.
- Gran Canaria Island-Fuerteventura-Lanzarote, (Transcan) 393 km., 480 circuits.
- Peninsula-Canary Islands (Pencan 2), 1,415 km., 1,840 circuits.
- Peninsula-Balearic Islands (Penbal) 307 km., 1,380 circuits.
- Pencan 2 extension (Tenerife-Gran Canaria Islands) 108 km., 1,840 circuits.

Submarine cable. Under construction:

- Brazil-Canary Islands (Braican 1), 5,804 km., 160 circuits.



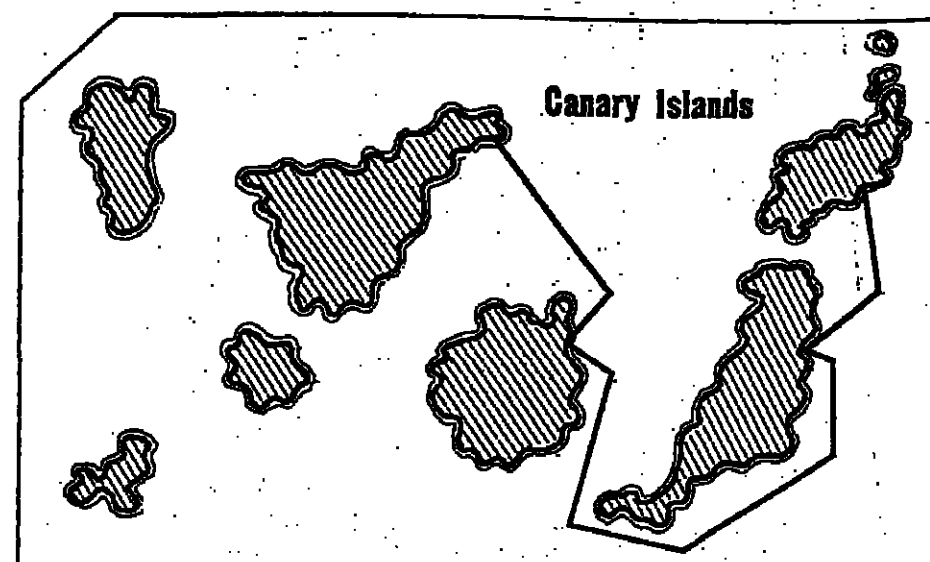
Stations for satellite communications

- Earth station in Buitrago 1-Atlantic.
- Earth station in Buitrago 2-Indian
- Earth station in Agüimes (Canary)-Atlantic.
- Earth station in Maspalomas (Canary)-Atlantic.

Rapid increase in installations

	Increase in 1971	Total as at 31.8.1971
Telephones	475,914	4,838,698
Telephone lines	306,116	3,089,531
Telephone exchanges ...	—	10,765

The network of radio links and co-axial cables covers the whole national territory.



هنا من الاتصال

TELECOMMUNICATIONS VII

Expanding potential in microwaves

JOHN A. SAXTON, Director, Radio and Space Research Station, Science Research Council

lant at Queens University of Belfast

here overall balance is clearly in favour of land-based systems. This is because the range of frequencies available for use in the atmosphere and space is limited. The range of frequencies available for use in the atmosphere is limited to the range of frequencies available for use in the atmosphere. The range of frequencies available for use in space is limited to the range of frequencies available for use in space.

But there is a serious problem in the use of microwaves for communication. The problem is that the range of frequencies available for use in the atmosphere is limited. The range of frequencies available for use in space is limited to the range of frequencies available for use in space. The range of frequencies available for use in the atmosphere is limited to the range of frequencies available for use in the atmosphere. The range of frequencies available for use in space is limited to the range of frequencies available for use in space.

AÑ

installation

increase

1971 as at 31st

75.914 4.58

06.116 3.08

s and co-axial

territory.

There is no end in sight to the growth in demand for communication services. Indeed, the pressure is increasing, and the available means of transmission are being stretched to the limit. These include cables, optical fibres, and microwaves. The range of frequencies available for use in the atmosphere is limited to the range of frequencies available for use in the atmosphere. The range of frequencies available for use in space is limited to the range of frequencies available for use in space.

Radio waveguides are a new development in the use of microwaves for communication. They are a new development in the use of microwaves for communication. They are a new development in the use of microwaves for communication. They are a new development in the use of microwaves for communication. They are a new development in the use of microwaves for communication.

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Planned growth in research is a key factor in the development of microwaves for communication. It is a key factor in the development of microwaves for communication. It is a key factor in the development of microwaves for communication. It is a key factor in the development of microwaves for communication. It is a key factor in the development of microwaves for communication.

Specialized in system design, supply and installation of stationary and transportable satellite communication earth stations.

firms associated in STS are:

Società Generale di Telefonia ed Elettronica S.p.A.

Soc. Italiana Reti Telefoniche Interurbane S.p.A.

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STATIONS COMPLETED

Earth Stations Under Construction

Balance 1 in Argentina

Mobile Earth Station in Uganda

Balance 2 in Argentina

Balance 3 in Italy

Balance 4 in Italy

Balance 5 in Italy

Balance 6 in Italy

communications involving space vehicles, of course, free wave techniques must be used. Until recently wavelengths shorter than 7.5 millimetres were unallocated in the Radio Regulations. This changed after the World Administrative Radio Conference for Space Telecommunications which was held by the International Telecommunications Union in Geneva in the summer of this year. At that time new allocations were extensively made down almost to a wavelength of 1 millimetre to cover the development of systems using space techniques for communication and radio navigation in the aeronautical and maritime services. The requirements for radio astronomy and space research in this waveband were also borne in mind. In due course allocations in this part of the spectrum are also likely to be considered for similar terrestrial systems and for fixed and mobile services. A knowledge of the way these millimetric waves are propagated is essential for two purposes: first, to determine the quality and reliability to be expected for a given service; and, second, to determine the degree of interference which may occur between different services sharing the same wavelength allocation, and thus to establish the feasibility of such sharing to permit the optimum use of the spectrum.

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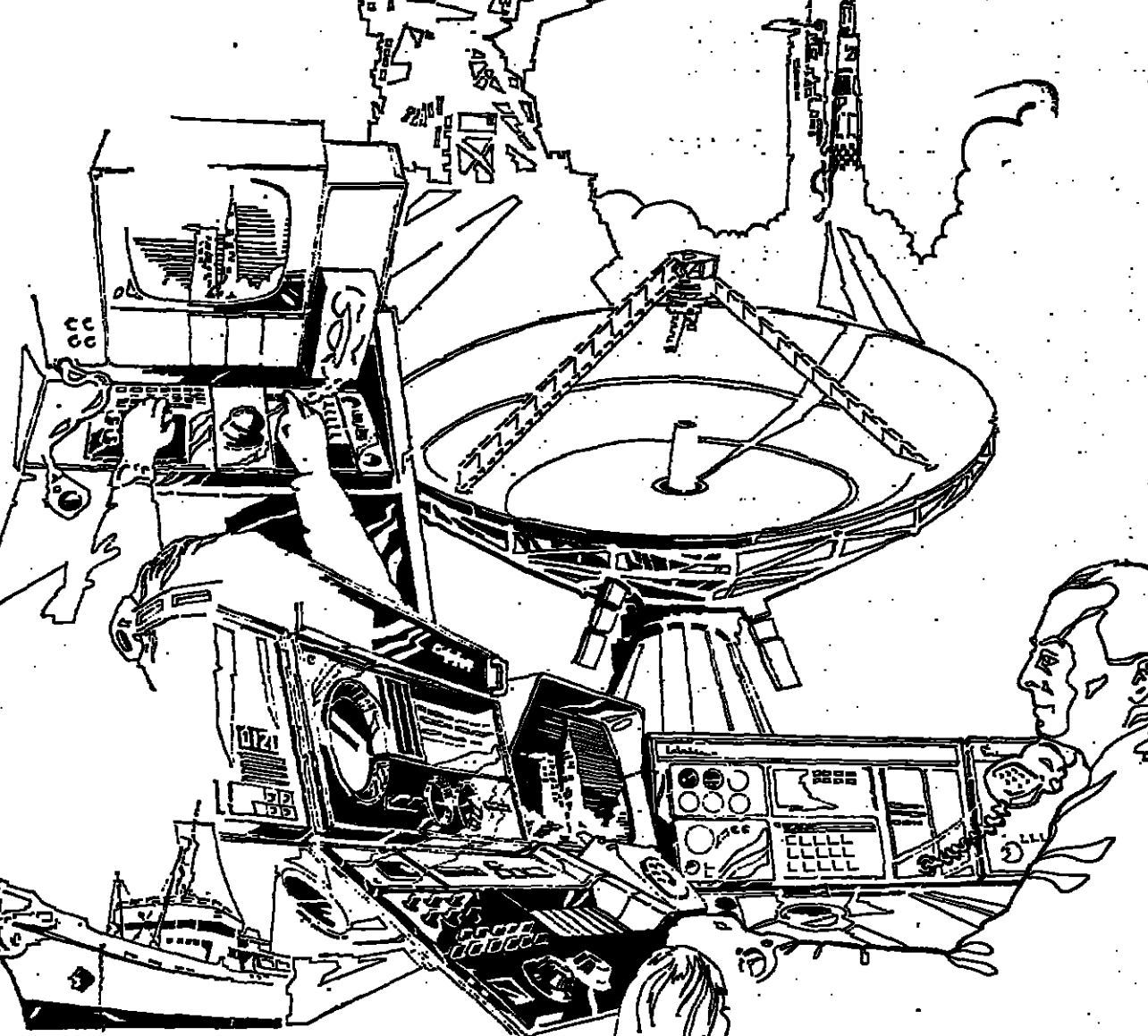
Balance 3 in Italy

Balance 4 in Italy

Balance 5 in Italy

Balance 6 in Italy

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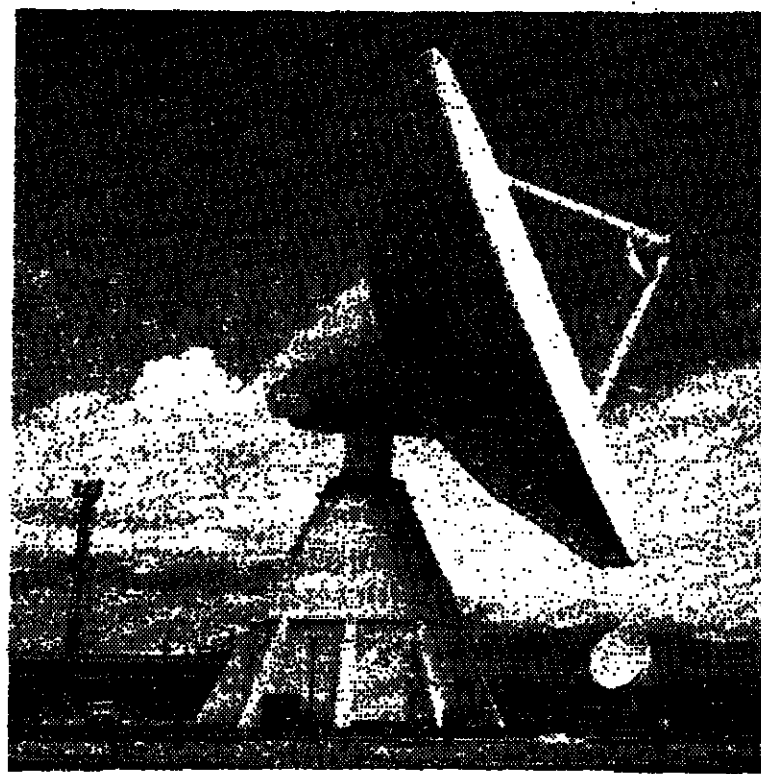
STET—Società Finanziaria Telefonica p.a.—is the financing company for IRI—Istituto per la Ricostruzione Industriale for the department of telecommunications and electricity. Within the orbit of the STET GROUP and specifically in the telecommunications sector, are ITALCABLE, TELESPAZIO AND SIP.

ITALCABLE

—CABLEGRAM, RADIO-TELEGRAPH, AND TELEX SERVICES S.p.A. The Company, through a State Concession, develops all international public service communications in Italy. Telegrams, telephones, telex, private lines, photo-telegraphic and all other up-to-date applications of telecommunications techniques. ITALCABLE is associated with all the most important international companies and administrations dealing with telecommunications through transmissive means co-operating frequently amongst themselves. The most appropriate method of combining submarine telephone cable, artificial satellite and High Frequency radio is used. Through the telegraphic services 54 countries are connected directly by 28 radio circuits, 18 by cable and 13 by satellite. By telex, 42 countries are reached with 47 direct circuits by radio, 202 by cable, and 181 by satellite. Through the telephone system, 29 countries are reached direct, 17 by direct radio circuit, 85 by cable and 102 by satellite.

TELESPAZIO

—Joint Stock Company for Spatial Communications—is the sole concessionaire in Italy for the setting up and running of satellite telecommunication systems. The Italian ground station for spatial telecommunication "Piero Fanti" includes the aerial complex Fucino I for connections by satellite with North and South America. The Fucino II complex is for connections with the Middle and Far East and Australia. A third aerial carries out telemetric and remote control services of the Intelsat satellites. This activity has been entrusted to Telespazio, which represents Italy at the International Telecommunication Satellite Consortium, in recognition of its capacity as a specialised company. Its ground station has a very favourable geographic position in relation to the orbit of the satellites.



View of the new aerial Complex Fucino II at the "Piero Fanti" station

SIP Italian Telephone Company—completed a subscriber trunk dialing system throughout Italy in October 1970. All 6,500,000 telephone subscribers can now use 9,400,000 telephone instruments. Italy is among the first nations in the world to have a completely automatic inter-urban service. The country is seventh in the world for the number of instruments installed.

Planned growth in research

By DAVID FISHLOCK

On the edge of Suffolk a few miles from Ipswich what should become one of the most exciting research centres in Britain has begun to take shape. The site has seen stimulating research before, for it was once the airfield where D-Day was carried out by his famous stalling experiments with biplanes during the first World War. Its future, however, rests with telecommunications, which for the subscriber means services that would surprise Dr. Who.

"My personal dream," admits Mr. John Bray, director of research for the Post Office, "is to see that corner of East Anglia develop into a telecommunications campus." It lies within a few miles of two major industrial research centres in the field, those of Standard Telecommunications and Marconi, and also one of the leading schools of this technology in the University of Essex. But biggest factor by far will be the £10m laboratory now being built at Martlesham for the Post Office.

As other articles in this survey emphasise, the Post Office is entering a phase of unprecedented expansion in telecommunications. Research and development is growing too, above all because of the novel technologies and new types of service about to be introduced. "All these are

Dollis Hill

For 50 years now the Post Office Research Station at Dollis Hill, on a hilltop in North-West London, has been the home of Post Office research. Development is done a few miles away in the City headquarters. "Dollis Hill has served us pretty well," says Bray, "but now is too small." There is no room for field work on bulky new systems such as waveguide transmission lines and earth stations for

Continued on next page

Islands

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TELECOMMUNICATIONS VIII

What customers want and what they get

By ELSBETH GANGUIN

"People in this country—and indeed the world over—act as though they have a God-given right to superb communications of every possible kind, for every possible purpose at every possible place and at every possible time. They want all at give-away prices, assuming, of course, that they cannot have them for free."

"We at the Post Office do not disagree in principle, although we express the objective rather more cogently. We talk about providing the best services we can at the lowest prices that are possible..." Mr. A. W. C. Ryland said when he was still the P.O.'s acting chairman and chief executive.

True, during the memorable strike earlier this year, the telephone and Telex services just about saved our bacon. We were less infuriated by crossed lines, wrong numbers, failures to connect, and the various other frustrations heavy users of the telephone service meet day by day. But soon afterwards we were beginning to wonder once more whether this is really the best the Post Office can do.

There are about a quarter of a million people working on the P.O.'s telecommunications side. The capital investment plan for the next five years comes to £2,700m.—and the bulk of it is to go into the telephone and telex systems. Over the next 10 years telephone connections will double: "We are now in one of three homes—and we will do in ten years what it has taken us 90 years to do before." (The P.O. is particularly keen to sell extensions, rather than to make entirely new connections, for obvious reasons. There is that business of cables...)

All the same, there are now over 9.5m. exchange connections of which 2.75m. are business telephones. The 15m. exchange and connections predicted for 1981 are expected to haul in mostly residential phones, with "the only new growth point" being the skilled tradesman, aged 30 to 35, married with one or two children, and an income of about £1,500 a year. Could he afford thought to be billing errors, but only 1 per cent. of them could

be substantiated, 1.4 per cent. could not be substantiated, and the rest had their charges waived, although errors could not be proved. All told, 16 per cent. of bill complaints concern rentals, 31 per cent. operator calls, and 26 per cent. dialled calls. There is an automatic check on the computer's output, if the bill turns out to be "incredible," the computer will have made a "ridiculous" mistake.

However, sometimes it is not only the computer but the human check on it that fails, and there are, of course, other possibilities, which I know to my annoyance, if not my cost. Two overseas trunk calls were booked while our house was empty and locked up. The mystery was never resolved. I think, but the money was not paid either. The saga of the months-long battle with the P.O., which was bent on converting my non-existing coin box to decimals, must also be booked to the human element in the telecommunications proceedings. In the London area at least there is understaffing—though the P.O. says that wastage is no worse than in other office employment.

Local networks

In other words, according to the Post Office, it is the manufacturers who are holding things up. Even so, trunk network capacity was increased by 15 per cent. last year, and work is also being done on the local networks. Indeed, "these are our highest priorities." The P.O. admits to an average failure rate in the case of trunks of about 9 per cent., whereas it puts the local failure rate at only around 4 per cent.

If one half of the troubles is due to congestion on the lines, the other half is largely due to the slow replacement of the P.O.'s Strowger electromechanical switching equipment by Crossbar and fully electronic systems. It may take another 20 years until this is complete. However, the P.O. is replacing some of the more fault-prone parts of Strowger by electronic devices in the meantime, and this should go a long way towards remedy.

Anyway, about 60 per cent. of the complaints which reach the P.O. are about bills. Some of which 2.75m. are business 30m. bills are sent out a year, and, says the P.O., there are many, many entries on one bill—yet the complaints usually listed which the P.O. is not all too keen to perform! Like the priority telegram service, for instance, which is "completely uneconomic."

"It costs 72½p to deliver the average telegram, whereas the average revenue is 37½p," I was told. The P.O. added, however, phones. They will be "increas-

ingly offered within the decade," in the missing bits. Some 13m. but they may cost £2 a quarter more than the dial phones. It will still take as long to get a call as with the dial method, you but pushing buttons is faster than dialling, and "you get the number out of your memory quickly." This might appeal to the businessman who now has a secretary standing by to dial his calls for him. Even more futuristic: "eventually you could send signals to switch your cooker on at home," all by pushing buttons.

The P.O. has still more for the businessman. It is now running a contravision service making it possible for business people to hold conferences by television—we have got the technique right... there is strong interest from business firms... it will go like a bomb."

The cost can work out less than putting up, and entertaining, businessmen who have to visit each other to hold conferences. Radio paging is on the drawing board. On the fact of it, this may have big potential, believes the P.O. It would mean a national code system, allowing people to "bleep" each other, wherever they may be. And there are some experimental view-phones about, but few of us may live to see these in wide use. "You need a lot of band width: one vision link equals about 1,000 telephone calls." For the moment, you can do it between offices which are next door to each other. By the end of the decade view-phones could be in use over short distances. But for the rest of us? "Very expensive," says the P.O.

Data transmission

Telex is one of the quickest growing parts of the P.O.'s telecommunications business. Another is data transmission. There are some 14,000 data terminals in the U.K., "more than in the rest of Europe put together." This "explosive" business goes up by 100 per cent. year by year. Now carried on the basic telephone system, the P.O. is planning a completely separate, high-speed data network to be operative by 1976-77. "We are well ahead on data,"

As for the businessman, he now uses telex. This service is growing by about 15 per cent. a year. "There are now some 33,000 telex stations in the U.K." ("The service got a flip from the strike"), and after the £200 a year rental has been paid, the call charges are said to be generally below telephone costs. Nearly half the telex traffic goes overseas. If customers do have complaints, it is about difficulties in getting through, particularly overseas. "Nothing we can do about that," says the P.O. It added that while traffic was up by 35 per cent. during the strike, "we still managed surprisingly well."

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Research

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Inevitably, in telecommunications research, one draws comparisons with the Bell Laboratories in the U.S. This formidable organisation, with several research centres, will still be several times the size of Martlesham. But his new laboratory, says Bray, "will be as good as anything in the U.S. and the best this side of the Atlantic." He admits he has culled a number of good ideas in laboratory design from Bell, including a modular laboratory pattern that affords very flexible use of space, and full air-conditioning "of quite a high grade."

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New services

Bray already knows what it is like to be linked to the boss's desk by Viewphone. The new premises will have Contravision facilities as part of normal communications. These may evolve into such realms as 3-D Contravision in colour "that now, its purpose is to virtually recreate the scene at the other end." And internal communications will be backed up by a powerful data processing system, giving ready access, for instance, to "computer-aided design."

But new—and more reliable—services will demand new ways of handling the immense growth in traffic. Viewphone, for example, needs a hundred times the capacity of today's telephone. Every bit of the £2,500m. telephone system, from the inter-city trunk cables to the wires into the home, must be expanded enormously if the new services are to become part of our everyday life around the end of this decade.

One of Martlesham's first

major projects will be the trial, in 1973, of the waveguide under realistic conditions, to see whether the technology can make such a would reduce transmission per unit of information by third or one-fourth. By the 1980s Britain could have as much as 1,000 km. of waveguides linking its big cities. Another big project will be to rebuild a "transistor factory" at Dollis Hill for several Contravision in colour "that now, its purpose is to virtually recreate the scene at the other end." And internal communications will be backed up by a powerful data processing system, giving ready access, for instance, to "computer-aided design."

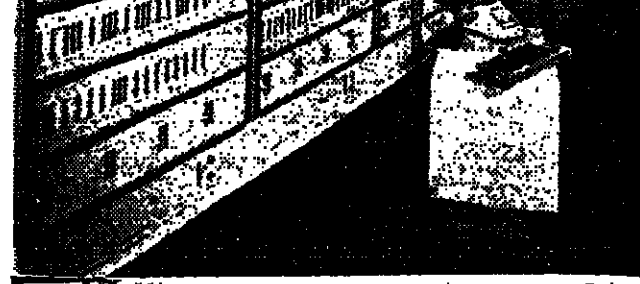
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Research (Cont'd)

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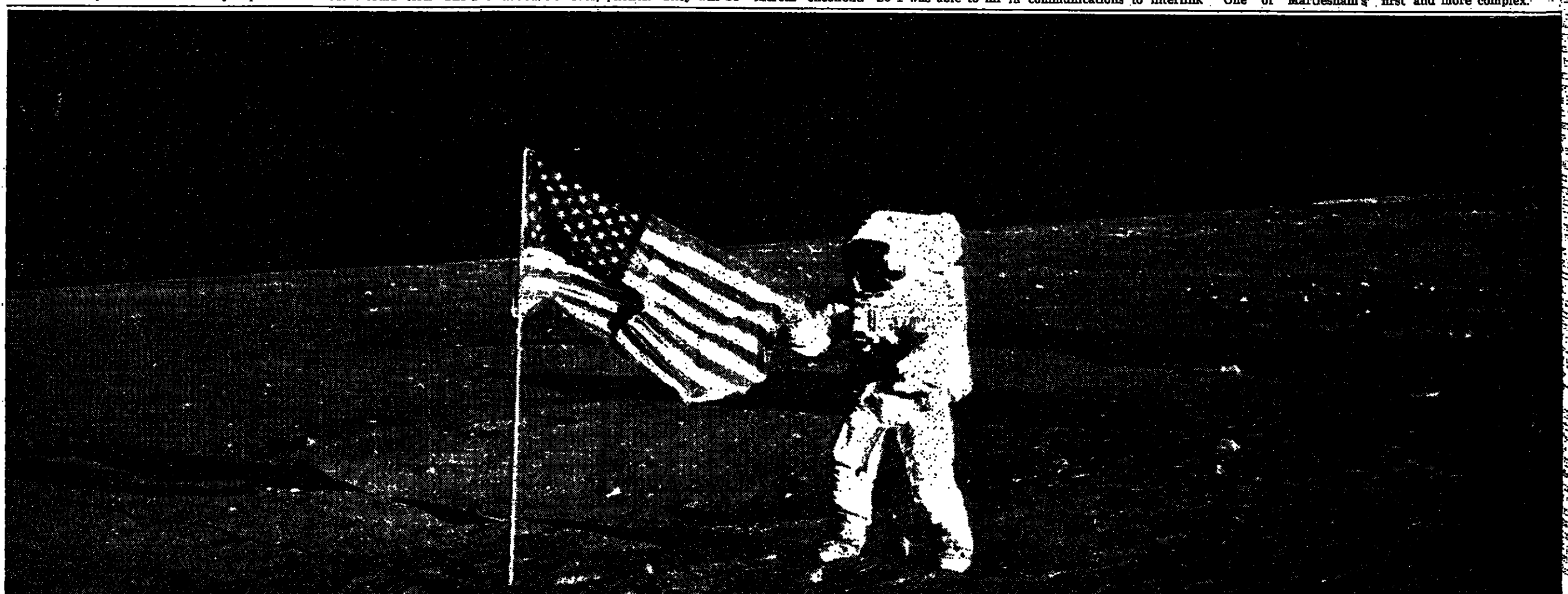
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One of Martlesham's first



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SOCIETY TO-DAY

BY JOE ROGALY

Ulster: the next stage but one

GOVERNMENT'S present People are sickened by what they see and led to argue either that 'there is no reason for the boys to get blown up and shot like that,' or that 'we should get out and leave it to the Irish to fight it out among themselves,' or that 'if we leave the IRA will deserve what it gets from the Protestants.'

such circumstances. It is to me, there is little to be done but to work once again on the list of possible policies, in the hope that something better does after a while. It is a sad hope, but it is a hope. The IRA is no conceivable policy for Northern Ireland that does not contain within itself the seeds of new dangers and violence. There is no way out. The search for a policy therefore be for the policy offers the prospect of the least damage in the run.

must, however, be a practical policy: one that commands support of the British people. The latest Gallup poll shows that while 44 per cent of respondents support the idea of keeping the Army in Northern Ireland, no less than 59 per cent want it withdrawn. National Opinion Poll has a much higher proportion (59 per cent) of respondents who want the troops out of the area.

Another big reason for this is almost the effect of television. The Americans have simply that what amounts to the harassment of the troops by the most powerful, and least understood, means of communication yet devised by man. This is a change that certainly should be made: the same can-

not be said of the next two possibilities on the list. The first—to bring in the UN—would seem less ludicrous if the UN itself were not so deeply in deficit and so clearly in a state of turmoil over the admission of the Chinese Communist Government and the consequent anger of the U.S.

The second—to bring the troops home at once—might well lead to a great increase in the amount of bloodshed. If this happened (and there really is no telling, one way or the other) it would be the British scuttling that would be in large part to blame; this is something that few of us would like to have on the national conscience. It is a simple idea, a scuttling, and it is gaining ground inside the Labour Party—but the dangers are too great for it to be contemplated at present.

Two further ideas both make sense, but only if carried out together, as part of a single policy. The first is to impose direct rule from Westminster; the second is to intensify the present efforts to bring about a political settlement between as many Catholics and Protestants inside Northern Ireland as can be persuaded to be a party to it.

Bipartisan

Pressures towards such a settlement—starting with the Labour Government's efforts that led to the Downing Street agreement of 1969 and carrying on through Mr. Heath and Mr. Maudling's latest series of conversations with those of the protagonists who have been willing to talk—are a continuing

part of what has until recently been a bipartisan British policy. Its purpose has been to coax—or, if necessary, compel—the Government of Northern Ireland to introduce social and political reforms that would give the Catholics a share in the economic and administrative control of the country. But the pace of reform has been too slow; it did not prove possible until as late as last week to bring in Mr. Gerard Newe as the sole Catholic in the Ulster Government, while in other walks of life there has been more progress on paper than in reality.

Clearly a simple continuation of this policy of pressure on the Stormont Government would not in itself be sufficient; it is here that the alternative of direct rule (during which real reforms might be quickly imposed) comes in. This prospect has long been resisted at Westminster because it would constitute a deeper step into the Irish quagmire than British Governments are normally willing to contemplate.

Yet many people, both in London and in Belfast, now believe that direct rule is inevitable, and that it had better come as soon as possible. The Rev. Ian Paisley, who claimed at the weekend that it was a short while away (a claim that the British Government has denied), may have been out in his timing; he may, however, be correct in his general conclusion.

Unification

One way out has always been available, and it has always been implied by British policy. It is to accept that, one day, Ireland will be reunited. The difficulty all along has been that successive British Governments have pledged that reunification will not take place against the will of the Parliament of Northern Ireland.

But that Parliament is no longer commanding the support



Ulster now: "Reunification is not a policy for to-day, but preparation for it is..."

Government to guarantee them a decent life; half a century possible to crack down hard on the remaining recalcitrants. This in itself would help to improve the political atmosphere in the Northern counties.

In spite of all these advantages, the proclamation of a British Government intention to seek a means of reunification within a specified number of years should not take place in a vacuum. It would be most dangerous right now; most safe after a period of direct rule and really purposeful warfare against the IRA combined with constitutional talks and action towards reform in the North. It is not a policy for to-day, but preparation for it is, since it is almost certainly the policy for the next stage but one in the vanishing, and the Dublin Govern-

Northern Ireland.

Labour News

Engineering deadlock: government steps in

ROY ROGERS, LABOUR STAFF

Government has intervened to break down the engineering deadlock which threatens 40 per cent pay claim in talks later this month. The engineering unions can expect similar treatment of their pay claims in talks later this month.

The clerical unions had asked for a £2.70-a-week general increase, and a £4.50-a-week increase in minimum rates. If conceded it would mean a minimum rate to the TUC's target figure of £20 a week.

They based their claim on the alleged disparity between the pay of white and blue collar workers in the industry and also on the increased cost of living.

"Similar rate" In reply to the claim yesterday, the EEF produced figures which it claimed showed that the pay of clerical and manual workers had been increasing at a "very similar rate".

On the cost of living issue, the EEF pointed out that its members have also suffered from the situation created by inflation.

EEF members were in no sense prepared to accept that there should be a direct link between staff salaries and rises in the cost of living. To do so would be to perpetuate the inflation of costs and mean a further step to economic disaster, warned the employers.

In discussing new minimum rates, the employers were prepared to concede equal pay for women, although not in one step, provided there was also agreement on a definition of a minimum responsibility level to pay increases and that the rate should be negotiated only at national level.

The executives of the unions are in line with proposals to consider the EEF's proposals for further negotiations and will probably mean in about a month's time.

fast-ditch meeting on tomorrow row due to-day

PETER CARTWRIGHT, MIDLANDS CORRESPONDENT

COVENTRY, Nov. 2. A break-out of the deadlock has been made by Rolls-Royce, which employs 7,000 making aero-

U.K. demands change in Six fishery law

BY CHRISTOPHER LORENZ

THE BRITISH GOVERNMENT has indicated that it cannot sign the Treaty of Rome on the basis of the existing Common Market fishing policy. It is pressing for the status quo to be preserved for the present or, failing that, for the Six's policy to be adapted before Christmas to meet the requirements of a Community of Ten.

This stepping-up of the fishery argument from the technical to the political plane emerged today as Mr. Geoffrey Rippon, Britain's Minister for Europe, had talks in Bonn with the German Foreign and Agricultural Ministers, Herr Walter Scheel and Herr Josef Erd.

The feeling of Britain, together with Norway, that the present Community fishing policy is totally unsuitable has been well known for some time. Whitehall now sees it as the one main problem remaining to be solved in the EEC enlargement negotiations. Unlike previous points of discussion, it does not simply require a straight U.K.-EEC agreement but rather a multilateral arrangement.

The chief point on which Britain takes exception to the existing policy is that of access to fishing grounds. In company with Norway, Mr. Rippon's team has objected to the free access provisions about which the U.K. seems to be prepared to accept a six-mile limit, it does not see why Norway should be given preferential treatment over Britain and Ireland. The Norwegians are demanding a 12-mile limit.

In his talks with Herr Scheel,

Saleroom 10,000 gns for miniature

IN A SALE at Christie's yesterday of miniatures, which totalled £43,469, one by Isaac Oliver of 1645, third Lord North was £1,400 for a pair of Regency sold for 10,000 gns. To Fry who also bought two other miniatures of members of the North family, one by John Hoskins for 2,200 gns., and another by Benjamin White mahogany window seats for £1,000 to Turpin.

A tortoiseshell and ormolu 3-train chiming bracket clock made for the Turkish market went to a private buyer for £1,500. At Sotheby's a sale of oriental ceramics and works of art realised £18,402. A nine piece "famille rose" part service went to Mrs. Boas for £580, a pair of goose incense burners to Rogers Laurence for £540, a brightly enamelled vase to Bolton for £440 and a set of ten "famille rose" plates to Collins for £390, all these being pictures from the St. Peter Port studio are transmitted direct into viewers' homes throughout the Channel Islands. The link cost £10,000 to instal.

At Bonham's £8,698 sale of silver, plate and jewellery, a silver and pair of matching water by John Parker and Edward Wakelin, 1787-88 went to Mrs. Hart for £300. At an £8,421 picture sale by Kin, and Chesham, Pull-silver-gilt ewer by the same craftsman by Freeman for 1,150 gns. At Phillips' furniture etc. sale, which totalled £27,472, Osborne

BSC planning to shut pipe mill

BY MICHAEL CASSELL

THE British Steel Corporation is planning to shut down a £5m. pipe mill at Hartlepool which was opened four years ago. Talks with union officials about the plant's future have started, but a BSC tubes division spokesman said that unless another course of action became apparent in the three-month consultation period, the mill would shut early in 1972.

The talks follow the visit of Lord Melchett, BSC chairman, to

Hartlepool ten days ago when he said the future of the plant was in jeopardy.

The 20-inch pipe mill, which employs about 250 people, makes welded oil pipes for overseas markets as well as welded hollow sections for framework used by the building industry.

A world-wide over capacity in both products and severe price competition has led to BSC's decision. The plant has been

operating far below capacity for some time and incurred increasingly serious losses.

The BSC stressed that if the mill does close it will be retained on a care and maintenance basis and will be available for production again should the order position improve.

It is thought that orders at the Corporation's nearby 44-inch pipe mill may soon improve and if a two-shift operation is implemented up to 140 workers from the 20-inch plant may be provided with alternative jobs.

Over 70 people are to be made redundant at the Metal Box factory at Southwark, London. The dismissals follow a decision to stop producing certain labels for food cans and composite containers. The plant employs nearly 700 people and the redundancies will involve members of print unions.



The Melcom, low cost, visible record computer has another big advantage

Mitsubishi make it

MITSUBISHI: a company so big it makes the computer giants in the UK look small. And now they've formed a new company: Melcom System (UK) Limited. To give the highly successful Melcom compact computer the UK backing it deserves. Including an expert and enthusiastic team of programmers, systems analysts and service engineers who are dedicated to giving customers complete satisfaction from their Melcom installation. Melcom is today's outstanding example of advanced computer technology at low cost. Performing the standard office procedures demanded of a compact

computer—and more. It is a vital management tool which can immediately come up with all the answers on a visual display unit when you need them—without disrupting any work the computer may be doing. A Melcom can be made to grow as your company grows. Its basic memory of 12,000 digits can be expanded to cope with any future expansion deemed necessary. Right now, Melcom System can offer immediate delivery. So there's no time to lose. Get on to them today and find out what it's like to deal with a company that lives and breathes compact computers.

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Regional Offices in London, Birmingham, Bristol, Manchester and Glasgow

COMPANY NEWS + COMMENT

Kwik Save Discount exceeds forecasts

BOTH PROFIT and dividend in excess of forecast are announced by Kwik Save Discount Company for the year to August 28, 1971. The company was made public last November.

The final dividend is 35 per cent making 55 per cent against a prospectus forecast of 47 per cent. Pre-tax profit expanded to £1,029,000, against £900,000 forecasted and compared with £843,000 for the previous year. At the half-way stage it was up from £280,000 to £440,000.

The higher than forecast dividend is recommended in view of the results, the directors explain. 1970-71 1969-70

Turnover before tax £1,029,000 £900,000

Taxation 381 396

Net profit 648 504

Other expenses 33 37

Net balance 615 467

● comment

Kwik Save has beaten its pre-tax profit forecast by 14 per cent and improved margins by one point on a turnover rise of 36 per cent. However this was expected, and the share price drop of 10p to 200p ahead of the results is not surprising after a rise from a 1971 low of 118p. As things stand the 22.9 p/e on earnings of 8.85p a share reflects Kwik's pale position in discount stores, the fastest area of food retailing at the moment. After two months of the current year sales are apparently up by nearly 40 per cent, from 30 (against 25) stores at this time last year. Margins are expected to be maintained and with another six outlets in the offing for 1971-72, the p/e may not be discounting too much.

United Carriers' progress

AFTER TAKING into consideration the contribution from the latest acquisition, S. E. Thomas, pre-tax profits of United Carriers at £425,000, against £320,000 for the half year ended July 31, 1971, show a steady growth, says chairman Mr. R. R. Kearsley.

The second half so far appears encouraging and with the anticipated increase in consumer spending, Mr. Kearsley is optimistic that steady progress will be maintained. Profit for the year to January 31, 1971 was £745,000.

Net profit for the half year came out at £203,000, against £184,000 after tax of £172,000 (£138,000).

The interim dividend is maintained at 9 per cent on capital increased by a one-for-four scrip issue—an effective rise of 1.5 per cent—costing £58,865 (£47,188). Maintenance of the previous year's rate of 3½ per cent has been forecast.

● comment

A fair slice of United Carriers' 35 per cent growth in six months

INDEX TO COMPANY HIGHLIGHTS					
Company	Page	Col.	Company	Page	Col.
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Australian Estates	30	7	Hambros	30	4
Averys	29	6	Herbert (Edward G.)	29	5
Berkeley Property	28	6	ICFC	29	8
Bradford Property	30	7	Kwik Save	28	1
Brit. E'tronic Controls	28	4	Lindsey & Kesteven	28	6
Brooke Bond	29	3	London Australian	30	2
Cavenham	31	2	Manganese Bronze	31	1
Century Secs.	28	6	Maynards	30	6
CLRP	30	8	Rank Xerox	28	5
Colonial & General	30	6	Second Consolidated	30	7
Crabtree Electrical	28	5	Smith Inds.	29	5
Cray Electronics	28	3	Spark Hldgs.	30	5
De la Rue	31	1	Spink & Son	29	8
East of Scotland	28	2	Tricoville	29	4
Fairbairn Lawson	30	3	United Carriers	28	1
Gomme Holdings	30	1	Upton (E.)	29	6

profits stems from Thomas which contributed around £40,000 for the final five months of 1970-71 and good growth to date this year. Moreover, the integration of Thomas taking UC into higher-value areas in the South East accounts for much of the group's organic growth. UC takes a line through a parcel weight of 28 lb for its charges scale, anything heavier competing with the Post Office but lighter parcels proving more costly (and the lower the weight the greater the charge differential). Thus the group's modest bonus from the January-March postal strike. Current half profits will gain from a June price increase to cover (and more) a September wage award, and £370,000 pre-tax looks a minimum target for 1971-1972. That means a p/e on full capital of 13 at 88p backed by a good earnings record and a yield in line with the industrial average at 3.7 per cent. UC appears to have found its medium in express parcels, though a move into mail order is a mooted diversification.

East of Scotland Trust

A FINAL dividend of 4½p per 25p share by East of Scotland Trust raises the dividend from 6p to 6½p for the year ended September 30, 1971.

Net revenue for the year increased from £342,649 to £351,554 after tax of £26,425 (£25,579), including overseas tax of £1,063 (£1,023). The amount earned on the Ordinary capital is shown at 7.19p (6.97p).

Ordinary dividends absorb £282,744 (£271,434) and the Preference £51,780 (same). Net asset value per share was 318p (171p) including the whole of the dollar premium.

Cray hits £95,000 in first half

INCREASED production and sales in the first half of 1971 have led to Cray Electronics producing a profit of £95,578, against £80,066. Sales rose from £435,376 to £543,934. Sales at that level were not maintained during the opening part of the second half, due to a reduced intake of products by customers whose own production had suffered from the prevailing industrial climate. The remainder of the year is, however, traditionally a good trading period and deliveries are currently on the increase.

After tax £40,621 (£34,028), first-half net profit came out at £54,957 (£46,038). The interim dividend is raised 9 per cent to 15 per cent to reduce disparity; the 1970 total was 40 per cent from a net profit of £107,000.

The company manufactures components for the telecommunications and general electronics industries, and cabinets, chassis and modular housings for Telex and Data equipment.

● comment

Cray's first half profits are 20 per cent higher, maintaining the growth rate with which the prospectus forecast was beaten in 1970. The market, however, has apparently taken more notice of the trend to lower sales at the start of the current half for the shares fell 8p to 70p yesterday.

Whether the pick-up in sales that has since occurred will be able to make up any lost profit ground is not yet clear but if the upswing continues the group should be well placed to benefit given its near monopoly in the field of electro-equipment containers, that links Cray's fortunes firmly to the electro-communications industry. Thus a p/e of 9½

may be too cautious, taking earnings for the past reported 12 months.

Statement Page 37

13.5% total by Amal. Securities

A FINAL dividend of 8.5 per cent by Amalgamated Securities makes a total of 13.5 per cent for the year to August 31, 1971, against a forecast of at least maintenance of the previous year's 13.4 per cent.

Gross revenue from properties and other income increased from £1,172,593 to £1,317,719, and net profit, after tax, advanced from £291,283 to £326,481.

The Board has followed its policy of acquiring first-class properties to provide security of income and future growth. It is stated.

Since the year-end the company has exchanged contracts for the purchase of a group of 31 shops in 23 towns in Scotland let on full repairing and insuring leases to nationally known companies at an annual rent of £42,800.

● comment

At the attributable level, Amalgamated Securities has turned in a 12 per cent profit gain for the full year against a 6 per cent advance after six months. Allowing for conversion of the new loan stock this leaves earnings at 3.65p and the share at 89p (having been as high as 120p and as low as 72p) on a fully diluted p/e of 24½. This falls well behind the sector average of over 38, as shown by the F.I. Actuaries property share index. And while the price is at a substantial premium to the asset value at the end of the last financial year (73p), adjusting for the convertible to reduce disparity, the 1970 total was 40 per cent from a net profit of £107,000.

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● comment



It will now be apparent that the Brooks Group of Companies are not just burglar alarm specialists but an electronics oriented group with interests in leisure and security markets, declared chairman Mr. B. R. Clark in his statement presented to the annual meeting yesterday.

DIVIDENDS ANNOUNCED

Company	Current payment	Date of payment	Corresponding div.	Total last year	Total this year
Amalgamated Securities	8.5	Dec. 11	8.4	13.5	13.4
Avery	12.5p	Jan. 3	18.75p (c)	16	8.5p
Berkeley Property	13	Dec. 16	12	16	15
Brooke Bond Liebig	7	Dec. 22	7	10	10.2
Ceylon Tea Plants Int.	11.5p	Nov. 30	5	2.8p	2.625p
CLRP Investment	10	Dec. 8	1.625p	15	14
Colonial Gen. Trust	10	Dec. 15	5p	10p	10p
Colonial African Selection	12.5p	Dec. 21	5p	15	15
Crabtree	11	Dec. 17	11	15	15
Cray Electronics	(e)15	Dec. 20	10	—	40
De La Rue	7.25p	Dec. 10	2.1p	—	11.25p
East of Scotland Trust	14½p	—	4p	6½p	6p
Fairbairn Lawson	7	Nov. 15	10	10	10
Forbham (Holdings) Int.	(h)20	Dec. 17	7	—	30
Hambros	7	Dec. 17	7	—	6
Hambros "A" shares	7	Jan. 31	3	—	(d)8
E. G. Herbert	(g)35	Dec. 14	—	55	—
Kwik Save Discount	(e)35	—	—	—	15
London Assurance Gen. Ex.	9	Dec. 3	5	16	12
London Wilsons	11	Dec. 24	15	18	(f)20
Second Consolidated	8	—	7	12½	11
Smiths Inds.	5	Nov. 29	2	5	2½
Southern India Tea	10	Jan. 7	10	—	20
Spink and Son	10	—	7	—	—
United Carriers	15	Jan. 7	12	—	20

● Equivalents after allowing for scrip issue. 1 Amount per share.

(a) Tax free. (b) On capital increased by rights and/or acquisition issues. (c) Total of 7.5p indicated. (d) For 14 months. (e) To reduce disparity. (f) For 13 months. (g) Made public November, 1970. (h) In accordance with terms of offer by Hepworth Ceramic.

Crabtree holds 18½% total

PRE-TAX PROFIT of Crabtree Electrical Industries dropped from £845,748 to £808,642 in the year to July 31, 1971, after being £184,099 against £425,864 at half-way.

A final dividend of 11 per cent (same) maintains the total at 18½ per cent.

At mid-way the Board said that economic conditions were such that no improvement on profit levels was expected during the second six months.

The group is engaged in the manufacture and sale of electrical apparatus and equipment. Meeting. Sutton Coldfield, December 16 at 2.30 p.m.

● comment

Crabtree's second-half performance is a considerable improvement on the first, which must be a relief to shareholders. In August to January, profits before tax were more than halved on static sales, taking margins down from over 14 per cent to nearer 8 per cent; now the group is apparently on the mend with second-half profits holding all-square, though the lack of annual turnover statistics confounds attempts to plot any progress in margins. As for earnings, a substantial tax charge helps (33 per cent) and at 18½p a share they slip to 14.5p fully taxed. That implies 1970-71 p/e ranging from 10 to 11 times which may have recovery charms ahead of the accounts; the sector rates a 19 multiple and 3 per cent yield against Crabtree's 5.8 per cent at 162p, up 13p last night.

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INTERNATIONAL COMPANY NEWS + EURO MARKETS

Fiat reveals Polish plant plan and '71 profit hopes

FIAT's president, Giovanni Agnelli, said today that Fiat profitability will be better in 1971 than it was last year.

Fiat earned a net profit of £53.1m for 1970. He also revealed that a new plant to produce Fiat cars under licence in Poland will manufacture a completely new model which will be the smallest in the whole range. But he would not give any more details of the new car.

He said the plant was planned to have an initial output of 150,000 units a year, and this could eventually be doubled. He added that he considered Eastern Europe to be the fastest growing area for the motor industry generally over the next decade. Fiat's Togliattigrad plant in the Soviet Union, he stated, is working satisfactorily and output should rise to 1,500 cars per day in 1972 from the present 1,000-a-day level. Agnelli told the Press conference that Fiat's overall production levels for 1971 should be close to the 1,550,000 units produced in 1970, in spite of a loss of 133,000 units in the first half. Output levels in the second half of 1971 should be above those of second-half 1968, which was the last non-strike-affected base period.

IN BRIEF

Europe

● UGNE KUHLMANN today floated Frs.275m, 20-year, 8 1/2 per cent. bond loan priced at 99 1/2 per cent.

● SHELL INTERNATIONAL FINANCE of Geneva, will float a Sw Frs.200m, 6 1/2 per cent, 15-year loan at par on the Swiss capital market between November 3 and 9, Schweizerischer Bankverein confirmed as issuing syndicate leader.

● MADERAS INTERNACIONALES (MADERAS), the Spanish timber trading company, and the Colombian Maderas de Uraba have launched a joint programme for the import and distribution of tropical timber in Spain and other European markets. Based on the Colombian company's 400,000 square kilometres forestry concession, the timber will be shipped to Spain, where it will be stored and transformed into plywood for local consumption and re-export to other European markets.

● HEURTEY made a provisional loss of Frs.18.15m. In the first half of this year, in the whole of 1970, the engineering company made a net loss of Frs.63m.

● CIE DU NORD, the Rothschild group holding company, said revenues after interest in the first nine months of 1971 rose to Frs.1,530m, from Frs.1,325m in the same 1970 period. Exports climbed to Frs.575m, from Frs.398m.

● MOULINEX turnover rose to Frs.2,250m in the first nine months of this year compared with Frs.2,141m, in same 1970 period.

● ROLAY OFFSET MACHINERIE FABRIK UND SCHLEIFENHAGEN has put up a 3,600-ton works on a 32-hour work week.

COMPANY NEWS

Gomme plans to meet demand

PLANS FOR the development of Gomme Holdings, makers of G-Plan furniture, will take into account the potential growth in the home market, and the long term possibilities in the Common Market and export generally, says the chairman Mr. H. N. Sporborg. But the current concern is to increase deliveries to the retail market and service to the British public, who are sometimes having to wait an excessively long time for delivery in spite of the co-operation of leading stockists.

Mr. Sporborg says, service to the home market is as beneficial as export, as it reduces the requirement for imports of foreign furniture to meet the demand for high quality modern furniture.

Steps are being taken to expand production capacity at High Wycombe and at Nelson, Lancashire. The company has recently purchased premises adjacent to the Nelson factory. Work is already in progress to reconstruct and to equip the building with kilns and machinery as an independent production unit for wooden furniture components.

Cost will be about £200,000 and the plant should be in full production by the end of the current year.

This expansion will set free kilns and machinery at High Wycombe for increased cabinet production and the manufacture of wood frames at Nelson will increase capacity for upholstery manufacture.

As reported on October 20, for the year to July 30, 1971, group and company results were: turnover £234,469 (£208,880) and profit £34,362 (£30,300) and there is proposed a 1-for-1 scrip issue. For the current year, further increases in production and profit are expected.

Meeting, High Wycombe, Bucks, November 30 at noon.

Chairman's Statement Page 37

The London Australian and General Exploration Company is lifting its dividend from 15 to 18 per cent for the year to June 30, 1971, and proposes to make a two-for-one rights issue at 25p per share on the basis of the first nine months of 1971.

Group pre-tax profit increased from £220,000 to £238,000 after interest (£205,000) for the first half.

1970-71 1969-70

Group profit	£220,000	£195,000
Taxation	25,000	25,000
Minorities	50,000	50,000
Attributable	£145,000	£120,000
Dividends	45,000	45,000

Jessel Securities, which owns 69 per cent of the company, has agreed to underwrite the issue. The first instalment of 12 1/2p per share, will be payable on or about January 3, 1972.

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Nippon Steel cuts 10% off executive salaries

TOKYO, Nov. 2. Japan's major steel producers are attempting to have the Ministry of International Trade and Industry (MITI) issue an "administrative guidance" instruction asking for a cut in steel production. The manufacturers want a uniform production cut to prevent domestic market prices from declining further.

Nippon Steel has had additional difficulties in that its share of overall Japanese steel production fell to 24.3 per cent in the half ended September from 26.3 per cent, a year earlier, through domestic users diversifying their sources of supply.

NYSE firms to merge

NEW YORK, Nov. 2. van, formed in 1959, is an institutional research firm. It also has an investment banking business.

Both firms are members of the New York Stock Exchange and other principal security exchanges in the U.S. The combination will have gross revenues of about \$50m and a capital of \$34m.

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SOHIO SELLS CANADIAN HOLDING

TORONTO, Nov. 2. STANDARD Oil Company (Ohio) will offer the 93.6 per cent interest it holds in Canadian Oil of Calgary to Canadian investors, subject to favourable stock market conditions.

The sale of its interest in Canadian Oil became necessary to avoid possible conflict of interest in exploration programmes in the Arctic.

British Petroleum of Britain acquired a 25 per cent interest in Sohio in 1970 and through that acquisition an indirect interest in Canadian Oil. At the same time, BP owns a 66 per cent interest in BP Oil and Gas of Calgary, which competes with Canadian Oil in exploration programmes in the Canadian Arctic.

R. ZANUCK SUES FOX FOR \$14.5M.

NEW YORK, Nov. 1. RICHARD ZANUCK to-day sued his father, Darryl F. Zanuck, and other officials of 20th Century Fox for \$14.5m, for dismissing him as president of the film company last December.

He filed a joint suit seeking a total of \$18.2m, damages with his wife, Linda Harrison, and David Brown, former director of Fox's creative operations.

As reported on October 1, Zanuck claimed that the alleged breach of contract, defamation and intentional infliction of emotional distress.

COMPANY NEWS

Hambros sees little change in profit

CURRENT YEAR profit of Hambros is expected to be little changed, compared with the 1970, for the year to March 31, 1971.

Mr. Jocelyn Hambro, chairman, reports that group earnings for the half-year ended September 30, 1971, are in line with those for the corresponding period last year.

Fairbairn Lawson

GROUP results of engineers Fairbairn Lawson show a loss of £65,644 for the year ended June 30, 1971, against a profit of £314,986 but directors consider they should indicate now that there is an improvement in trading in the current year.

The loss is after full depreciation and all changes but before providing £42,468 for research and development expenditure and tax. There is no dividend for 1971.

At the half-way stage, when pre-tax profits had fallen from £116,359 to £41,148, directors said the disappointing trend was continuing.

SHIP MORTGAGE FINANCE

For the half year to September 30, 1971, pre-tax profits of Ship Mortgage Finance Company increased from £174,037 to £209,696.

ROSEBANK RUBBER (HOLDINGS) - Dividend for 1971, 10 per cent, payable March 31, 1972. For the year to March 31, 1971, turnover £2,224 (£1,824), Taxation £2,091 (£1,824), Net revenue £1,133 (£800), Profit £1,133 (£800).

Dividends £1,133 (£800). Loss on sale of investments £1,133 (£800). Dividend £1,133 (£800). Loss on sale of investments £1,133 (£800).

NEW FREEMAN CIGAR FACTORY

J. R. Freeman and Son, which makes Manikins and Hamlet cigars, is to have talks with Cwmbran (Municipal) Development Corporation with a view to building a factory at Cwmbran which would employ nearly 400 people, it was announced yesterday.

The factory would occupy 40,000 square feet of the Somerset Street industrial site and cost about £450,000. Manufacture would begin early in 1973, with full production expected by mid-1974.

INTERNATIONAL MONEY TRANSFERS

Citibank introduces MARTI

BY WILLIAM LOW

ONE OF THE least publicised but most besetting bankers throughout much of the world is that concerning the transfer of dollars from one bank to another. The enormous expansion of the Eurodollar market in recent years has resulted in what some bankers claim is a near breakdown of the existing system for handling interbank payments.

At the moment, if, for example, the ABC Bank, of London, owes the XYZ Bank, of Hamburg, \$10m, the ABC Bank probably will channel its payment through a clearing house in New York clearing banks. This means that instructions must either be cabled to New York, with all the attendant risks such as wrong information or a delay in transmission. For a major bank which may have as many as 1,500 transfers daily, mistakes can prove expensive in terms of money and time.

CEDEL Euro-clear line

CEDEL and Euro-clear, the European market's two clearing systems, have now implemented a "working agreement." This means that transactions between participants of the respective systems will be cleared on the basis of a payment in New York the day after bonds are delivered by one system to the other in Luxembourg.

As explained in last week's Financial Times, the agreement was scheduled to become operational on October 1 last, but a disagreement over certain legal provisions delayed its implementation.

SELECTED EURODOLLAR BOND PRICES MID-DAY INDICATIONS

Strait	Bid	Offer	Strait	Bid	Offer
Alcoa Corp 5 1/2% 1985	103	104	Borden 5 1/2% 1981	104	104 1/2
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COMPANY NEWS

Further growth for Maynards

SINCE THE CLOSE of the year all sections of Maynards, with the exception of Maynards (Canada), have continued to make satisfactory progress, and make Mr. J. D. Maynard fully expects this year's profits to be further increased.

While not involving the cost of the four weeks trading period leading up to Christmas, in which available spending power and the weather have "vital and unpredictable influences," he points out that the year's trading period profit, before tax for the year ended June 30, 1971, amounted to £492,703 compared with £358,887.

Optimism at Spark Holdings

ALL in all, the directors of Spark Holdings feel they have grounds for being optimistic about the future, chairman, Mr. J. G. Lawson, says in his annual report.

As stated on October 7, pre-tax profits for the year ended April 30, 1971, declined from £284,391 to £287,071, but the dividend effectively raised from 33.32 per cent to 37.5 per cent.

The bulk of future profits and growth is likely to continue to be derived from the light engineering division, which already accounts for some 88 per cent of total profits, the chairman says.

Colonial and General Trust pays 1% more

Colonial and General Investment Trust is raising its dividend from 14 per cent to 15 per cent for the year to September 30, 1971 with a final of 10 1/2 per cent.

Net revenue for the year was £153,107 to £161,551, after tax of £112,500 (£73,311).

A joint announcement yesterday by the directors of the company and of City of London Brewery and Investment Trust said that it had been possible to agree terms for a merger which were likely to be acceptable to the shareholders of both companies and negotiations had been terminated.

Consolidated Second

As forecast, a final dividend of 11 1/2 per cent, by Second Consolidated Trust makes 18 1/2 per cent for the year to September 30, 1971, compared with 20 per cent for the previous 13 months—equal to the annual rate of 13.46 per cent.

Net revenue for the year was £513,720 compared to £555,720 for the 13 months.

Year 12 mths. 1970-71 1969-70

Revenue	£513,720	£555,720
Taxation	94,200	94,200
Profit before tax	£419,520	£461,520
Dividends	£419,520	£461,520

Australian Estates

Reporting a 1971 first-half pre-tax loss of £1,377m, £1,412,132 profit of the Australian Estates Company again shows that because of the seasonal nature of activities, these figures cannot provide any real guide to the year's results. For all 1970 the 1970.

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In the investment game, Charterhouse can put you several moves ahead.

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Secondly, a clear-cut strategy. We like to deal on a personal level with our clients. We agree on investment objectives - the type of investment and the return required. Then we manage the fund against these specific objectives on a day-to-day basis.

We see ourselves as specialists in the prompt identification of change and the exploitation of what such change implies.

If you think our particular expertise can help you, please contact Michael Levete of the Charterhouse Finance Corporation at 01-248 3999. Or if you are in the Midlands ring Ralph Sammel at 021-236 4936.

Charterhouse

The Charterhouse Group Limited, 1 Paternoster Row,
St Pauls, London EC4P4HP.

هڪ نامن الاصل

Alfa Romeo and Fiat star at Turin show

By James Ensor

TURIN, Nov. 2

ALFA ROMEO Alfamod will be hard to dislodge, but he is the Fiat 128 sports coupe among the stars of the Turin Show, which opened today. They are similar cars, designed to appeal to the same type of customer, and show the way in which European car design is moving. The Italians tend to set new trends for Europe, partly because of the large number of independent styling houses in Turin and Milan.

Turin's prominence in European design has been confirmed by the Ford's decision to open a styling studio here. The product of this, a special edition of the GT1000 mid-engined sports car, is expected to be on show.

It is notable how alike the Alfa and the Alfa are in styling. They are broad, squat, fastback, clipped rear ends and large boots. Both have front-wheel drive and powerful over-camshaft engines of small capacity.

The 1200 c.c. Alfamod is little slower than the 1000 c.c. Fiat coupe. But Alfa are fast, sporting cars, and Alfa's disc brakes. Then they reach the British market at the end of 1972 or in 1973, both are likely to be between £1,200 and £1,300.

Alfa plant
The Alfamod, which will be in a new plant near Naples, is the rate of 250,000 per year. Alfa's bid to break out of the Fiat class is to become a multi-sized motor manufacturer. It will raise Alfa's output from 100,000 last year to 200,000 by 1975.

The 128 coupe, based on the Alfa 1300, which is now Europe's third best-selling car, is a bid to foil Alfa's plan to make a classic struggle between Europe's second largest producer, with the advantages of vast production and resources, and the State-owned Alfa Romeo, which has engineering skill on its side.

Italian companies are wary of German and French competition. Strikes have plagued both Alfa and Fiat for years. Fiat lost the output of 30,000 cars in six months, because of strikes it will probably lose more than 100,000 cars in 1972. Alfa's production programme has been in jeopardy because of locally inspired strikes. Out of its Milan plant has been back to the 100,000 mark.

Dr. Agnelli, the Fiat boss, and Dr. Lancia, head of Alfa, are both in the car business. But imports led by Fiat's Ford Escort models, NSU Prinz, Opel Kadett and other cars have reduced Alfa's market share to 28 per cent. of the total.

Dr. Agnelli admitted, they are early in 1972.

At the Annual Meeting on November 2 in London, the Chairman announced the retirement from the Board of Mr. John Hodge and after 38 years' service and paid tribute to his loyalty and unwavering devotion to the Company's affairs.

COMBINED ENGLISH STORES GROUP LIMITED

Authorised Share and Loan Capital	Issued
£300,000 in 74 per cent. Cumulative Preference shares of £1 each	£300,000
£1,000,000 in Ordinary shares of 12½p each (fully paid)	1,694,783
£1,000,000 in Ordinary shares of 12½p each (5 per cent. paid)	3,188
£300,000	£1,997,971
9½ per cent. Partly Convertible Unsecured Loan Stock 1980-91	£1,850,000

Application has been made to the Council of The Stock Exchange, London, for permission to deal in and quotation for £1,850,000 9½ per cent. Partly Convertible Unsecured Loan Stock 1980/1991. Particulars of the Stock will be available from 3rd November, 1971, in the Exchange Telegraph and Moodies Statistical Services and may be obtained during normal business hours on any weekday (Saturdays and Bank Holidays excepted) up to and including 26th November, 1971, from:

Slater, Walker Limited,
30, St. Paul's Churchyard,
London, EC4M 8DA,
or
Pannure Gordon & Co.,
21, Austin Friars,
London, EC2.

£25m. order for bridge at stake

By Michael Cassell

BRITISH BRIDGE BUILDERS is to try to secure a £25m. contract to build what would be the world's largest single-span suspension bridge, across the Humber estuary.

BBB, a consortium of three leading bridge construction companies, originally set up to tender jointly for major bridge contracts abroad, comprises the Sir William Arrol branch of the Clark-Chapman-John Thompson crane and bridge division, Cleveland Bridge and Engineering and Redpath Dorman Long, part of the constructional engineering division of the British Steel Corporation.

Freeman Fox and Partners has been consulting engineer for the Humber bridge, which will have a clear span of 4,580 feet, about 95 feet above the estuary. The contractors to build the bridge are expected to be named next year.

Work on the project will take four years and over 34,000 tons of steel will be used.

The contract is expected to provide work for hundreds of men.

British Bridge Builders already has some notable successes in international bridge construction. The three companies together built the Forth and Severn suspension bridges and both Cleveland and Redpath Dorman Long are currently associated in construction work on the Rio-Niteroi bridge in Brazil.

Cleveland is working on the Bosporus bridge in Turkey and Redpath Dorman Long has recently been awarded a contract to complete the Lower Yarra Bridge in Australia.

RAC move to combat fog menace

THE RAC yesterday suggested that brighter rear lights on vehicles could help combat the fog menace, and called for investigation of ways of segregating cars and heavy vehicles during fog.

Fog was Britain's one motorway menace, the Secretary-General of the RAC, Mr. Mills Baldwin, said at Birmingham. "We have asked the Road Research Laboratory for information on their investigations into accidents in fog and of new developments to deal with the problem. In particular, we have asked what assessment has been made of the advantages of brighter rear lights for use in fog."

Mr. Mills Baldwin said this would enable a following vehicle to travel further behind without losing sight of the rear lights of the vehicle in front. The distance for braking in an emergency would therefore be greater.

"We noted that in the M6 disaster a short time ago, many of the killed and injured were occupants of private cars crushed by much heavier commercial vehicles."

"Accordingly, we have asked the Laboratory if they have considered any possible ways in which it would be practicable to segregate commercial and private traffic in fog, for instance, by requiring lorries and cars to use separate lanes."

'Point of law' defence in £148,000 suit
By Our Own Correspondent

GUERNSEY, Nov. 2. A POINT OF LAW is to be the initial defence of National Westminster Bank Finance (CI) in a case in Guernsey in which the company is being sued for over £148,000 damages.

This was explained to Guernsey's Royal Court to-day by the company's advocate, Mr. J. W. J. Wade, who has asked for a week's adjournment so that the point of law could be argued before the island's bailiff, Sir William Arnold, who was not presiding at to-day's sitting.

National Westminster Bank Finance (CI) had been ordered by the court to table defences by to-day to the damages claim which is being brought by Huguette Youssou (Properties) Co., of St. Peter Port.

The claim arises from the alleged failure of the company to honour an agreement to lend £25,000 to Mr. W. J. Wade, a director of the property company, for the purchase and development of a local hotel.

FEWER KILLED IN PITS
The number killed and injured in coal mine accidents dropped from 100 killed and 712 seriously injured in 1969 to 91 killed and 641 injured in 1970, says Mr. J. W. Calder, Chief Inspector of Mines and Quarries, in his report for the two years (HMSO, price 40p).

But he finds no cause for complacency and draws attention to the continued increase in the rate of accidents in haulage and transport and surface categories. These, he says, are partly due to changing techniques and the more intensive use of plant and machinery.

Shipping chief welcomes Common Market entry
BY JAMES McDONALD, SHIPPING CORRESPONDENT

HILL-ON-TEES, Nov. 2. AS SHIPOWNERS, the Hunting Group supported Britain's move to go into the Common Market, declared Mr. C. P. M. Hunting, the chairman, at the launch here to-day of the group's 167,000 tons oil-bulk-ore (OBO) carrier Tyne Bridge.

"As shipowners dealing in an international market we feel the right decision is being made," he declared. "We are used to dealing with our brother shipowners in Europe and have not found them too impossible."

"Teething troubles there will be, but at least Britain will have a voice in future decisions rather than just a dimly effective series of complaints."

The Tyne Bridge was laid down there when we had at one time hoped at this Swan Hunter yard in and expected."

APPOINTMENTS

Sir H. Prideaux to head Brooke Bond Liebig

Sir Humphrey Prideaux is to become chairman of BROOKE BOND LIEBIG on January 1 in succession to Mr. John Brooke, who retires at the end of this year. Other changes taking place on the Board at that time will be the appointment of Mr. P. Blackburn and Mr. P. L. Brazier and the retirement of Mr. K. R. M. Callale, Mr. D. G. H. Wright and Mr. J. V. Cooper.

Mr. J. S. Hendrick is to relinquish his positions as managing director and chief executive of BROOKE BOND OXO on December 31 to be replaced by Mr. R. T. Tring, who will replace him as managing director and chief executive and Mr. J. M. Thomson and Mr. P. E. Savary are joining the Board.

Mr. W. L. Bell, at present head of the British Development Division in the Caribbean, has been appointed director of the Council for TECHNICAL EDUCATION AND TRAINING FOR OVERSEAS COUNTRIES. He will be succeeded as head of the Development Division by Mr. J. E. Rednall, at present chief executive of the Overseas Development Administration. It is expected that both appointments will take effect in January.

Lord Thomas of Remenham has resigned as a director of CARBON ELECTRIC HOLDINGS to reduce his business commitments. He continues as president.

Mr. Konrad Kohlhammer, managing director of Konradin-Verlag Robert Kohlhammer GmbH, Stuttgart, has been elected chairman of INTERNATIONAL BUSINESS PRESS ASSOCIATES.

The ABBEY NATIONAL BUILDING SOCIETY has made the following appointments from November 1. Mr. H. L. F. Timberlake, chief executive, and Mr. G. H. Optiz, a joint general manager, Mr. R. P. Harding remains joint general manager.

These appointments follow the announcement earlier this year of the retirement from executive office of Mr. S. W. G. Morton, managing director, and Mr. N. F. Gosden a joint general manager. Mr. Morton continues as deputy chairman and Mr. Gosden is being appointed to the Board.

Mr. Brian Gore is to join RANK BUSH MURPHY on December 1 as marketing director. He is at present a director of Garland Compton.

Mr. R. T. F. Allen and Mr. R. A. Carter have been appointed to the Boards of ALLOY AND METAL PRODUCTS and ALLOY AND METAL (OVERSEAS).

Mr. R. O. Kerry, general manager of BOLTON'S HAIR ALLOY CO., has joined the Board.

Mr. H. Saxena Tate, a director of Tate and Lyle and managing director of Canada and Dominion Sugar, has been elected a fellow of the AMERICAN MANAGEMENT ASSOCIATION.

Mr. Denys Scholes, technical director of TELECOMMUNICATIONS, is to retire at the end of the year, but will remain as consultant.

Mr. T. A. O'Malley, a regional director with FORWARD TRUST (Midland Bank Group) has been appointed marketing director.

Mr. E. C. PAYTER AND CO., an Alcan Bore Industries subsidiary, now incorporates Alcan Building Services, formerly a division of Alcan Booth.

Mr. L. P. Bowen has been appointed sales director of E. G. Payter and Mr. W. P. Cotton has become sales director of Alcan Building Services.

Mr. C. E. Birkenhead has been appointed a director of FIBRE GLASS (Pilkington Group) and continues as general manager of the company's insulation division.

Mr. C. W. Thorpe has been appointed sales director of LAWTON (SUCCESSORS), a subsidiary of Bury and Masco (Holdings). Prior to this appointment Mr. Thorpe was with Bury and Masco Industries.

Mr. J. H. Lloyd has retired from the Board of the MILN MARSTERS GROUP. He had been with the company for 38 years.

Mr. Bryan Fawcett has been appointed managing director of CROSFIELDS FARM FOODS (SOUTH WEST), a subsidiary of Crofsfields and Calthorpe.

Mr. D. A. Taylor, who joined AUTOMATED PRINTED CIRCUITS earlier this year as sales director, has now been appointed managing director.

Mr. F. F. Rogers, formerly a director and general manager, is leaving the company to devote more time to his own business interests.

Miss E. Geurvitich, managing director of Rainham Timber Eng-



Sir Humphrey Prideaux

neering Co., Mr. D. S. Cook, Mr. J. S. Coors and Mr. H. P. Hillman have been appointed to the Board of the PHOENIX TIMBER COMPANY.

Mr. D. R. Longhurst and Mr. E. W. Marsh have joined the Board of Phoenix Softwoods.

Mr. Keith Drake, managing director of General Foods, Banbury, has been appointed president-director-general, GENERAL FOODS FRANCE, from April 1.

Mr. G. Westrop will succeed Mr. Drake as managing director at Banbury from January 1. Mr. Westrop is currently general manager of G. F. Kibon in Brazil.

Professor S. F. Edwards, Professor of theoretical physics, University of Manchester, has been appointed a member of the UNIVERSITY GRANTS COMMITTEE.

Mr. K. P. Legg, Mr. M. V. St. Giles and Mr. T. K. Faris have been appointed additional directors of the LONDON AUSTRALIAN AND GENERAL EXPLORATION COMPANY, a subsidiary of Jesse Securities.

Mr. William Major, a vice-president of Bankers Trust Company, London, has been appointed a director of BANKERS TRUST FACTORS.

Mr. P. R. Sheaf, Under-Secretary, Department of the Environment, has been appointed chairman of the SOUTH EAST ECONOMIC PLANNING BOARD from November 29. He succeeds Mr. J. Catlow, who takes charge of a new Land Use Policy Directorate in the Department.

Mr. G. J. Skinner succeeds Mr. D. O'Connell as secretary to the Board and to the South East Economic Planning Council.



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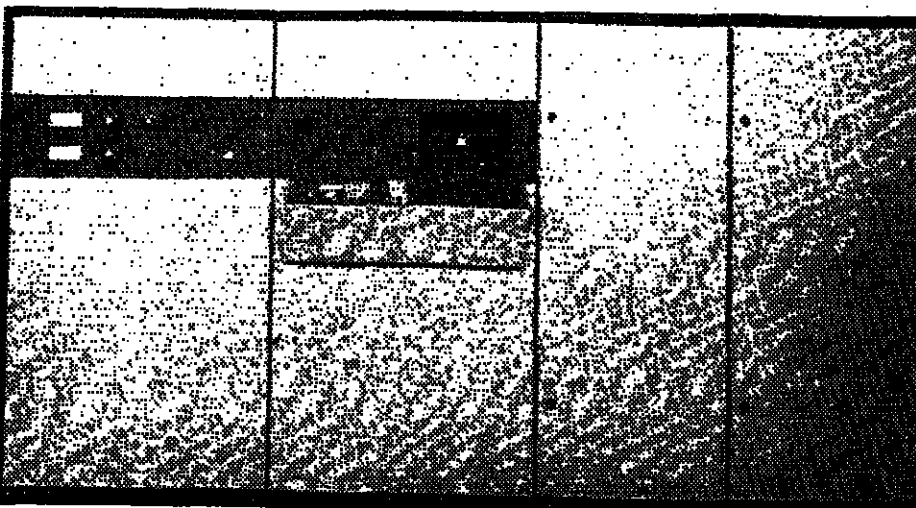
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This Advertisement is published in connection with an application to The Council of The Stock Exchange, London, for permission to deal in and for quotation for the whole of the issued share capital of Highland Electronics Group Limited ("the Company") and is not an invitation to any person to subscribe for or purchase any shares in the Company. The Directors collectively and individually accept full responsibility for the accuracy of the information given and confirm, having made all reasonable enquiries, that to the best of their knowledge and belief, there are no other facts the omission of which would make any statement in this Advertisement misleading.

HIGHLAND ELECTRONICS GROUP LIMITED

(Incorporated under the Companies Act, 1929)

Share Capital

Authorised

£2,500,000

in 12,500,000 Ordinary Shares of 20p each, of which 8,752,110 have been issued

Issued, fully paid and converted into Stock

£1,750,422

On 15th October 1971, the Company and its subsidiaries ("the Group") had no mortgages, debentures, charges, loan capital, bank borrowings or similar indebtedness, guarantees (except in the ordinary course of business), hire-purchase commitments or other material contingent liabilities.

DIRECTORS

JACK DELLAL, 23 Ickeside Place, London W14 8AA. (Chairman)
MICHAEL COHEN, B.Sc., 20 Fallowfield, Stannors, Middlesex. (Managing Director)
STANLEY MALCOLM VAN GELDER, F.C.A., 2 Cambridge Square, London, W2 2PS

BANKERS

LLOYDS BANK LIMITED, 83 Cannon Street, London EC4N 8DL
DALTON, BARTON AND COMPANY LIMITED, Hyde Park House, 60 Knightsbridge, London SW1X 7JZ

BROKERS

JOSEPH SEBAG & CO., 3 Queen Victoria Street, London EC4N 8DX, and The Stock Exchange, London

SOLICITORS

D. J. FREEMAN & CO., 9 Cavendish Square, London W1M 9DD

AUDITORS

WHEAWILL & SUDWORTH, 10 Cork Street, London W1X 2NR. (Chartered Accountants)
GOODMAN, JONES & PARTNERS, 61 Portland Place, London W1N 3AJ. (Chartered Accountants)

REPORTING ACCOUNTANTS

PEAT, MARWICK, MITCHELL & CO., 11 Ironmonger Lane, London EC2P 2AR. (Chartered Accountants)

SECRETARY AND REGISTERED OFFICE

BARRY MARTIN PINCUS, A.C.A., Hyde Park House, 60 Knightsbridge, London SW1X 7JZ

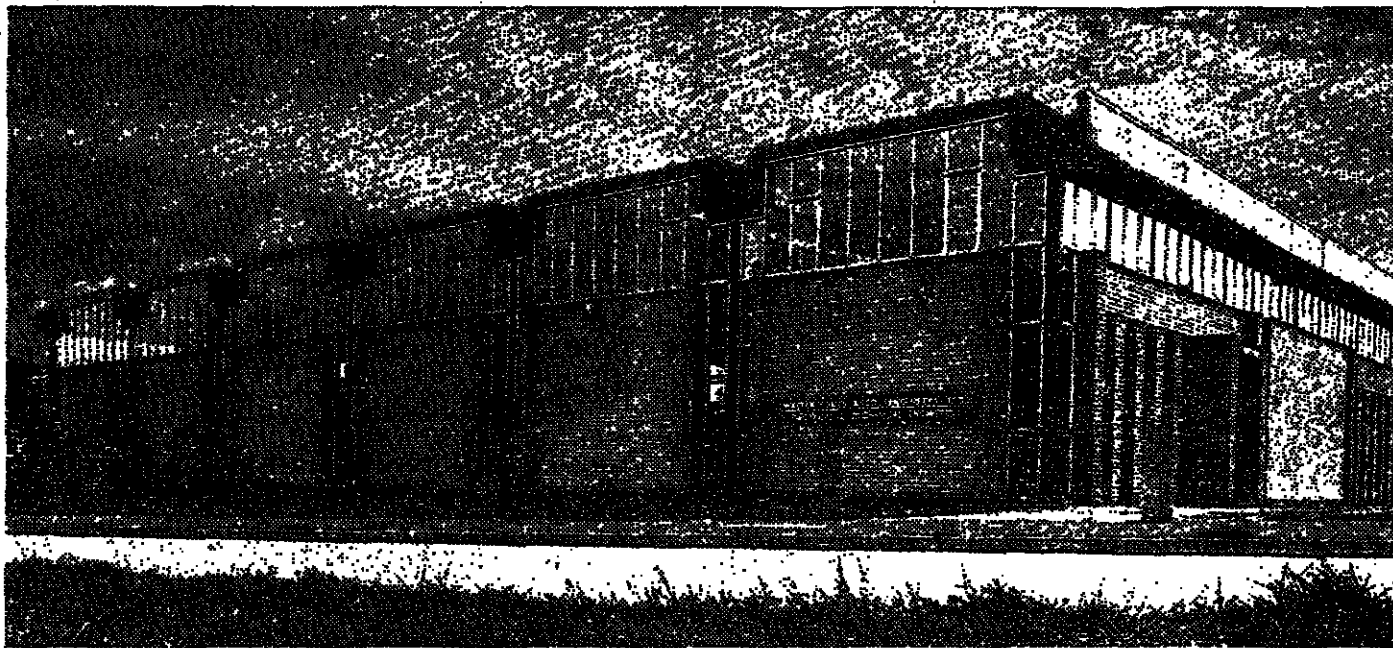
REGISTRARS AND TRANSFER OFFICE

CHARTERHOUSE REGISTRARS LIMITED, Granby House, 95 Southwark Street, London SE1 0JA

THE GROUP

The Company, which is a holding company, has the following subsidiaries:

Name of Company	Principal Business
Highland Electronics Limited ("Highland")	Manufacture of electronic equipment.
Walter Jones & Co. (Engineers) Limited ("Walter Jones")	Manufacture of electrical and electronic equipment.
Ardenite Limited ("Ardenite")	Marketing of hearing aids.
Ardenite Acoustic Laboratories Limited ("Acoustic")	Manufacture of hearing aids.
The Whalton Shipping Company, Limited ("Whalton")	Investment Company.
Nucleotronics Limited ("Nucleotronics")	Manufacture of resistance thermometers.
W. S. McMillan & Co. Limited ("McMillan")	Distribution of electronic equipment.
British Cybercom Limited ("British Cybercom")	Not trading.



The Walter Jones Factory at Ashford, Kent

The title to approximately 31 per cent. of Nucleotronics' property at Mappeshall is freehold, the remaining 69 per cent. being registered at H.M. Land Registry with a freehold possessory title. Insurance has been effected against the possibility of Nucleotronics' title to the possessory portion proving deficient.

Nucleotronics' factory occupies an area of approximately 3,000 sq. ft., and planning permission is being sought for a further structure of approximately 2,000 sq. ft. to be erected on adjoining land.

The Ardenite Companies

Both Ardenite and Acoustic were incorporated in 1937. Ardenite is a marketing company selling hearing aids, under the trade name of "Ardenite", and accessories, produced principally by Acoustic at its manufacturing plant at Windsor. Both companies were founded by the Dent family and remained in their control until 1960 when they were acquired by EMI. Ardenite's main office and selling organisation is at Windsor and it has twelve shops bearing Ardenite's name in major centres throughout the United Kingdom from which it sells its own aids and accessories.

Ardenite moved to premises in Windsor in 1965 at which it carried on its own production until 1967, when Acoustic took over the manufacturing side of the business from the same premises. Ardenite's profits suffered in 1967 and 1968 when their share of the market was reduced owing to a reliance on old designs and insufficiently vigorous marketing methods. The Ardenite Companies employ approximately 150 people, of which some 80 work at Windsor and the remainder are either employed in or sell from the regional shops. Sales are made on a cash, credit or internally financed hire purchase basis and since early 1970 Ardenite has also rented out aids. The renting of aids will become an increasingly important part of the business, and at present 40 per cent. of all hearing aids despatched to customers are on a rental basis.

It is intended with the help of the design team of Highland that a new range of hearing aids be designed to make Ardenite more competitive both in the home and overseas markets. It is also proposed to further promote the rental side of the business where the Directors consider good opportunities lie. In addition, the Directors consider it would be advantageous for further shops to be opened in other major centres in the United Kingdom and new selling techniques including a new incentive scheme for salesmen have been introduced. Ardenite is becoming increasingly involved in the screening and monitoring of industrial noise, and as a result is increasing its sales of ear protective equipment.

Management

The Managing Director of each of the Ardenite Companies, Mr. Percy Henry Joseph Stirling, aged 56, has been working for the Ardenite Companies since 1937. Mr. Michael Cohen, the Managing Director of the Company, has had considerable experience in this sector of the electronics industry and is on the Boards of the Ardenite Companies.

Premises

Ardenite's regional offices are all leasehold premises with the exception of its freehold property at 5 Royal Exchange Square, Glasgow, C.1, with an approximate floor area of 423 sq. ft.

Details of the leasehold premises are as follows:

Location	Approximate Area Sq. ft.	Unexpired Term Years	Annual Rent £
Ardenite House, Thames Avenue, Windsor, Berks	7,680	14½	5,200
98, 100 and 102 Wigmore Street, London, W.1	15,422	4½	17,800
3/5 Duke Meads, London, W.1	42	8½	1,475
7 St. Martin's House, Bull Ring, Birmingham, 5	697	10½	2,500
34b Victoria Street, Blackpool	303	1½	650
10a Merchant Street, The Broadmeads, Bristol, 1	580	14½	800
64 Queen Street, Cardiff	495	4½	300
8 Railway Street, Chatham, Kent	196	2½	300
10 Station Road, West Croydon, Croydon, Surrey	297	4½	750
5 Crown Passage, Kingston-upon-Thames, Surrey	196	1½	550
5 Albion Street, Leeds, 1	619	4½	1,400
6a South John Street, Liverpool, 1	556	6	900
58 King Street, Manchester, 2	4,455	8½	4,000
34 Castle Street, Swansea, Glam.	844	6½	750

Notes:

(1) Parts of the London and Manchester premises are sublet to the extent of approximately 13,170 sq. ft. and 3,570 sq. ft. producing an annual rental of £22,150 and £2,700 respectively.
(2) The premises at Kingston-upon-Thames are fully sublet, producing a rental of £700 p.a.

Walter Jones

Walter Jones was incorporated in 1938 to acquire the electrical and mechanical engineering manufacturing business of Walter Jones and Company carried on since 1919 by the late Mr. Walter Jones, father of the present chairman and managing director. The business consists of the design and manufacture of high precision rotating machines with associated electronic equipment. The products of the company include rotary converters, tachometer generators, electronic speed regulators, servo amplifiers, a.c. servo motors and telephone exchange ringing and signalling machines.

Management

The Chairman and Managing Director of Walter Jones is Mr. Harold Hosgood Jones, aged 65, who joined the business in 1931 and has been chairman and managing director of the company since 1941 upon the retirement of his father. The other directors are Mr. George Edward Persson, aged 49, production controller, and Mr. Cyril Woods, aged 58, production engineer and Mr. Kenneth Altman, aged 50, is sales manager. These three men have been with Walter Jones for 30, 38 and 25 years respectively. Details of service agreements entered into between Walter Jones and the Directors and senior staff are set out below.

Walter Jones employ approximately 200 people of whom some 25 are part-time and relations with staff are good. The company operates two pension schemes for senior and qualifying staff.

Premises

The premises of Walter Jones are as follows:

(1) Charlton Works, 38-38 Newlands Park, Sydenham, London SE26 5NG. These premises, comprising offices and a factory, are freehold and have an approximate total floor area of 14,150 sq. ft. A professional valuation dated 6th August, 1971, carried out by Messrs. Lewis & Tucker, Incorporated Valuers, of 16 Hanover Square, London, W1R 0AU valued these premises in the sum of £93,500.

(2) Walter Jones Factory, Brunswick Road/Chart Road, Ashford, Kent. These premises, comprising offices and a modern factory, are freehold with an approximate total floor area of 11,437 sq. ft. A professional valuation dated 6th August, 1971, carried out by Messrs. Lewis & Tucker, as above, valued these premises in the sum of £55,000.

McMillan

McMillan was incorporated in Scotland on 8th June, 1961, and commenced trading on 3rd February, 1968. This company acts mainly as agents in Scotland for a wide range of manufacturers of electronic and electrical components and is a distributor for W. H. Brady & Co. Limited.

The net assets of McMillan at 31st December, 1970, were £227. The profits for the year ended 31st December, 1970, were £8,905 before deduction of directors' remuneration and taxation and the comparable figure for 1969 was £3,018.

Mr. William Spence McMillan is the managing director of the company and it is intended to expand McMillan's present activities as agents and distributors for electronic and electrical components to provide for the Group an efficient distribution and sales service in Scotland.

Details of a service agreement between McMillan and Mr. W. S. McMillan are set out in contract (e) below.

Directors and Staff

Mr. J. Dellal, aged 48, joined the Board of the Company in April, 1969, with Mr. S. M. Van Gelder, who is aged 58. They are both Directors of Dalton, Barton and Company Limited, Bankers, who are financial advisers to the Company. Mr. M. Cohen (Managing Director), aged 55, joined the Board in November, 1970. He has been Managing Director of Highland since the business commenced in 1962.

Details of the full-time executive directors and staff of the Company's subsidiaries are mentioned above.

Working Capital

The Group has currently approximately £685,000 in cash which after the payment of current taxation, the proposed dividend, the balance due in respect of the acquisition of Walter Jones and expenses in connection with acquisitions and restoration of quotation, would leave approximately £326,000, which it is intended to utilise for the working capital of its subsidiaries. In the meantime the Directors are satisfied that the Group has sufficient working capital available for current requirements.

Profits, Prospects and Dividends

On the basis of the notes set out below the combined profit before taxation for the year ended 30th April, 1971, of the companies now comprising the Group, amounted to £221,809, as follows:—

	£
The Company and Whalton	35,254
Highland and Nucleotronics	112,991
The Ardenite Companies	6,690
Walter Jones	83,069
McMillan	3,905
Total	£221,809

Notes:

(1) For the above purposes the accounting year ends of Walter Jones and McMillan which ended on 31st March, 1971, and 31st December, 1970, respectively, have been regarded as co-terminous with those of the other Group companies.

- Where audited accounts covered periods other than the twelve months ending 30th April, 1971, profits have been apportioned on a time basis.
- Adjustments have been made to exclude the interest received and expended on acquisitions.
- The above profits have been arrived at after deducting exceptional items in the year of £24,370 for Ardenite and £9,138 for Highland.

The sales of Highland in the five months ended 30th September, 1971, slightly lower than those for the equivalent period of 1970, but this should be more than offset by increased sales achieved by Ardenite and Walter Jones in the period. Ardenite has increased its business of renting hearing aids as mentioned and it is intended to promote a new range of aids with the assistance of the department of Highland, which it is hoped will make Ardenite more competitive, home and overseas markets.

Although the Directors of the Company are at this stage unable to make any of the consolidated trading results for the year ending 30th April, 1972, they are able to recommend a dividend of at least 6 per cent. for the year to be payable in or about October, 1972. When the trading results of the Company, six months to 31st October, 1971, are known, further information on the profit for the current year will be made available to stockholders.

Accountants' Reports

(A) The following is a copy of a Report on the Company and Whalton, add to the Directors of the Company, by WHEAWILL & SUDWORTH, and GOODMAN, JONES & PARTNERS, Joint auditors to the Company:

The Directors,
Highland Electronics Group Limited,
Hyde Park House,
60 Knightsbridge, London SW1X 7JZ.

27th October, 1971.

Gentlemen,
Highland Electronics Group Limited
The Whalton Shipping Company, Limited
Highland Electronics Group Limited ("the Company") and The Whalton Shipping Company, Limited ("Whalton") have not traded since they sold their ships in 1962 and their total net income, before charging taxation, during the 16 months / 30th April, 1971, amounted to £107,410 in respect of interest on short-term bank deposits less provision for losses on realisation of insurance claims. The consolidated net assets of the Company and Whalton as shown by the audited accounts at 30th April, 1971, are set out below:—

	£
1. Net Tangible Assets	
INVESTMENTS IN SUBSIDIARY COMPANIES	
Shares at cost	1,075,268
Amounts due including proposed dividends	138,199
CURRENT ASSETS	
Debtors and accrued income	21,434
Insurance claims	22,709
Cash at banks	722,898
	766,841
Less:	
CURRENT LIABILITIES	
Creditors and accrued charges	54,937
Current taxation	42,736
Proposed dividend	80,428
	178,099
NET CURRENT ASSETS	588,742
Less: Corporation Tax payable 1st February, 1973	1,804
NET TANGIBLE ASSETS	£586,938

Notes:
(1) Shares at cost, including expenses: Highland Electronics Limited, £836,625; Ardenite Limited and Ardenite Acoustic Laboratories Limited, £242,743.
(2) There were no capital commitments at 30th April, 1971.

2. Directors' Emoluments
No emoluments were paid by the Company to directors in respect of the six months ended 30th April, 1971. Mr. M. Cohen waived remuneration from Highland Electronics Limited, a subsidiary company, amounting to £7,500 in respect of the period since the acquisition of that company; of that amount £3,534 relates to the period of his appointment as a director of the Company. Mr. Cohen's emoluments for current year will be £7,500 payable by Highland Electronics Limited.

3. Dividends
The dividends paid and proposed on the issued share capital of the Company for the five years and four months ended 30th April, 1971, are shown below.

	Grands Dividends
On issued capital of £1,218,312—	
Years ended 31st December, 1966 to 1968	—
Year ended 31st December, 1969	98.5
On issued capital of £1,750,422—	
16 months ended 30th April, 1971, for which provision has been made above	80.42
(after allowing for dividends waived in respect of £410,000 of issued share capital)	

4. Accounts
No audited accounts were made up in respect of any period after 30th April, 1971.

Yours faithfully,

WHEAWILL & SUDWORTH,
Chartered Accountants
GOODMAN, JONES & PARTNERS,
Chartered Accountants

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(B) The following is a copy of a report on Highland and its subsidiaries addressed to the Directors of the Company by Peat, Marwick, Mitchell & Co.:

Directors,
Highland Electronics Group Limited.

27th October, 1971.

Gentlemen,
Highland Electronics Limited
Nucletronics Limited

We have examined the audited accounts of Highland Electronics Limited and its subsidiary Nucletronics Limited ("Nucletronics") for the periods set out below:

Highland—21st December, 1962 (date of incorporation) to 30th April, 1971;

Nucletronics—for the 23 months ended 30th April, 1971.

A further subsidiary, British Cybercom Limited has not yet commenced trading. Highland acquired the whole of the issued ordinary share capital of Nucletronics a cash consideration of £26,006 on 30th January, 1970.

Turnover and Profits

We set out below the turnover of Highland for the period 21st December, 1962 to 30th April, 1971, to which has been added that of Nucletronics as from 30th January, 1970—

Period ended 30th April, 1964	£
Year ended 30th April, 1965	13,265
1965	34,045
1966	65,223
1967	141,181
1968	185,108
1969	204,881
1970	305,248
1971	918,852
1972	467,720

During the course of the audit of Highland for the year ended 30th April, 1971, it was found that certain assets had not been included and on investigation it was found that there were similar omissions in respect of earlier years. It has been possible to correct the position at 30th April, 1970, which has resulted in an increase in the value of assets of £21,093. It was also found that, at 30th April, 1970, amount of creditors had been understated by £17,428. It has not been possible to firm the stock adjustments required in respect of earlier periods (or whether any or adjustments are required) and we are therefore unable to report on the results of periods up to and including the year ended 30th April, 1970, other than in regard to the consolidated trading results of Highland and Nucletronics for the periods set out below, arrived at on the basis stated below, were as follows—

Period (1)	Turnover (2)	Profit before depreciation and amortisation (3)	Profit before taxation (4)	Profit after taxation (5)
December, 1962 (date of incorporation) to 30th April, 1970	918,852	210,852	6,535	204,017
ended 30th April, 1971	467,720	117,020	4,029	112,991

Notes:
(i) The profits shown in column (5) above are stated before taxation but after charging all expenses, including depreciation and amortisation as set out in column (4) above, less interest and directors' emoluments and after making such adjustments as we consider appropriate.
(ii) The profit for the year ended 30th April, 1971, is stated after writing off of £3,139 in connection with a new venture which has been discontinued.
(iii) The profit for the year ended 30th April, 1971, directors have waived emoluments of £10,500.

2. Net Tangible Assets

The combined net tangible assets of Highland and Nucletronics at 30th April, 1971, based on the audited balance sheet at that date and after making such adjustments as we consider appropriate, were as follows—

Cost or Valuation	Depreciation	Net Book Value
11,025	—	11,025
28,204	8,439	19,765
7,874	2,216	5,658
44,103	10,655	33,448

Fixed Assets
Stock and work in progress at lower of cost and net realisable value
Debtors
Creditors and accruals
Bank overdraft
Cash at bank and in hand

128,245
4,747
198,194
44,347
375,533

Current Assets
Stock and work in progress at lower of cost and net realisable value
Debtors
Creditors and accruals
Bank overdraft
Cash at bank and in hand

128,245
4,747
198,194
44,347
375,533

Current Liabilities
Creditors and accruals
Bank overdraft
Cash at bank and in hand

90,167
48,295
86,831
2,817
228,110

Current Assets
Deferred taxation
Corporation tax payable 1st January, 1972
Cash at bank and in hand

182,871
3,540
46,800
50,140
£132,731

Tangible Assets
Notes:
(i) The freehold property is included on the basis of a professional valuation in 1967, which resulted in a surplus of £3,917. No provision has been made in relation to any capital gains which might arise in the event of the disposal of the property.
(ii) There were no capital commitments at 30th April, 1971.

3. Dividends
It is proposed that Highland pays a dividend of £51,500 to the Holding Company, including £1,500 received from Nucletronics, for the year ended 30th April, 1971, and £1,500 received from Nucletronics for the year ended 30th April, 1971. No other dividends have been paid by Highland during the period covered by our report.

4. Accounts
No audited accounts of Highland or its subsidiaries have been made up in respect of any period subsequent to 30th April, 1971.

Yours faithfully,
PEAT, MARWICK, MITCHELL & CO.,
Chartered Accountants.

(C) The following is a copy of a report on the Ardente Companies addressed to the Directors of the Company by Peat, Marwick, Mitchell & Co.:

Directors,
Ardente Electronics Group Limited.

27th October, 1971.

Gentlemen,
Ardente Limited
Ardente Acoustic Laboratories Limited

We have examined the audited accounts of Ardente Limited ("Ardente") and its subsidiary Ardente Acoustic Laboratories Limited ("Ardente Labs") for the periods set out below:

Ardente—28th September, 1960, to 30th April, 1971;

Ardente Labs—for the 23 months ended 30th April, 1971.

A further subsidiary, British Cybercom Limited has not yet commenced trading. Ardente acquired the whole of the issued ordinary share capital of Ardente Labs a cash consideration of £26,006 on 30th January, 1970.

1. Turnover and Profits

The combined trading results of the Ardente companies for the period 28th September, 1960, to 30th April, 1971, arrived at on the basis stated below, were as follows—

Period (1)	Turnover (2)	Profit before depreciation and amortisation (3)	Profit before taxation (4)	Profit after taxation (5)
Months ended 30th June, 1961	823,248	10,798	15,872	(5,074)
ended 30th June, 1962	885,852	27,031	28,813	(1,582)
1963	830,740	53,485	35,299	18,188
1964	574,183	44,424	32,984	11,440
1965	545,815	30,024	26,883	4,341
1966	469,148	39,624	18,848	45,776
1967	392,181	46,611	12,530	32,881
1968	355,807	46,143	18,429	27,714
1969	375,802	57,349	18,117	38,232
1970	376,014	53,888	18,717	34,951
1971	343,068	19,388	18,623	885

Notes:
(i) The results shown in column (5) above are stated before taxation but after charging all expenses, including depreciation and amortisation as set out in column (4) above, less interest and directors' emoluments and after making such adjustments as we consider appropriate.
(ii) The profit shown in column (5) above of £885 for the ten months ended April, 1971, is after charging an amount of £24,370 resulting from a provision for obsolete stocks; some part of this provision, which cannot now be quantified, relates to previous years.
(iii) The results shown in column (5) above exclude:
(a) A profit of £8,820 in the ten months ended 30th June, 1961, resulting from a change in the basis of valuation of stock.
(b) Net losses totalling £5,015 in the period 28th September, 1960, to 30th June, 1961, incurred by a wholly owned foreign subsidiary of Ardente which was subsequently liquidated.
(c) A profit of £22,990 for the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales. It is not possible from the data now available to estimate the effects on the profits of the years up to and including 30th June, 1966, of applying the revised basis of accounting.
(d) The turnover figures shown in column (2) include hire purchase interest in respect of certain sales made subject to hire purchase agreements.

(iv) A profit of £22,990 for the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales. It is not possible from the data now available to estimate the effects on the profits of the years up to and including 30th June, 1966, of applying the revised basis of accounting.
(v) The turnover figures shown in column (2) include hire purchase interest in respect of certain sales made subject to hire purchase agreements.

(vi) A profit of £22,990 for the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales. It is not possible from the data now available to estimate the effects on the profits of the years up to and including 30th June, 1966, of applying the revised basis of accounting.
(vii) The turnover figures shown in column (2) include hire purchase interest in respect of certain sales made subject to hire purchase agreements.

(viii) A profit of £22,990 for the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales. It is not possible from the data now available to estimate the effects on the profits of the years up to and including 30th June, 1966, of applying the revised basis of accounting.
(ix) The turnover figures shown in column (2) include hire purchase interest in respect of certain sales made subject to hire purchase agreements.

(x) A profit of £22,990 for the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales. It is not possible from the data now available to estimate the effects on the profits of the years up to and including 30th June, 1966, of applying the revised basis of accounting.
(xi) The turnover figures shown in column (2) include hire purchase interest in respect of certain sales made subject to hire purchase agreements.

(xii) A profit of £22,990 for the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales. It is not possible from the data now available to estimate the effects on the profits of the years up to and including 30th June, 1966, of applying the revised basis of accounting.
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(v) The turnover shown in column (2) above excludes an exceptional amount of £50,389 in the year ended 30th June, 1967, resulting from a change in the method of accounting for hire purchase sales referred to in Note (ii) (c) above.

2. Net Tangible Assets

The combined net tangible assets of the Ardente Companies at 30th April, 1971, based on the audited balance sheet at that date and after making such adjustments as we consider appropriate were as follows:

Cost or Valuation	Depreciation	Net Book Value
12,343	3,123	9,220
37,595	24,005	13,590
61,265	51,981	9,305
35,781	5,808	33,173
18,837	3,937	15,900
£170,822	£88,634	£81,188

Fixed Assets
Freehold property
Leasehold property
Plant, machinery and fixtures
Motor vehicles
Hearing aids subject to rental agreements

12,343
37,595
61,265
35,781
18,837
£170,822

Depreciation
3,123
24,005
51,981
5,808
3,937
£88,634

Net Book Value
9,220
13,590
9,305
33,173
15,900
£81,188

Current Assets
Stock and work in progress at lower of cost and net realisable value
Debtors
Cash at bank and in hand

75,528
61,800
19,568
157,256

Less:
Current Liabilities
Creditors and accruals
Taxation
Amount due to Holding Company
Amount due to fellow subsidiary company
Bank overdraft

80,960
18,342
15,347
4,747
3,319
119,368

Net Current Assets
£68

Net Tangible Assets
£81,746

Note: There were no capital commitments at 30th April, 1971.

3. Dividends
The dividends paid on the issued ordinary share capital of £40,000 of Ardente for the five years ended 30th June, 1970, are shown below. No dividends have since been paid or are proposed on the issued share capital which now amounts to £40,000.

Year ended 30th June, 1966	Gross Dividend
1966	75,000
1967	40,000
1968	31,416
1969	19,806
1970	18,545

Accrued paid a dividend of £165 for the year ended 30th June, 1970.

4. Accounts
No audited accounts of the Ardente Companies have been made up in respect of any period subsequent to 30th April, 1971.

Yours faithfully,
PEAT, MARWICK, MITCHELL & CO.,
Chartered Accountants.

(D) The following is a copy of a report on Walter Jones addressed to the Directors of the Company by Peat, Marwick, Mitchell & Co.:

Directors,
Highland Electronics Group Limited.

27th October, 1971.

Gentlemen,
Walter Jones & Co. (Engineers) Limited

We have examined the audited accounts of Walter Jones & Co. (Engineers) Limited ("Walter Jones") for the period from 1st October, 1960, to 31st March, 1971.

1. Turnover and Profits
The turnover and profits of Walter Jones for the period 1st October, 1960, to 31st March, 1971, arrived at on the basis stated below, were as follows:

Period (1)	Turnover (2)	Profit before depreciation and amortisation (3)	Profit before taxation (4)	Profit after taxation (5)
Year ended 30th September, 1961	242,368	32,719	4,265	28,454
1962	240,287	43,319	3,881	39,338
1963	271,130	53,699	4,015	49,584
1964	228,447	18,160	4,042	14,118
1965	238,064	16,646	5,845	11,801
1966	298,012	36,347	5,454	30,893
1967	315,047	43,844	5,821	38,023
1968	347,172	24,531	6,892	17,639
1969	384,245	55,189	7,704	47,485
1970	365,773	81,723	8,825	52,898

6 months ended 31st March, 1971

224,262

41,104

4,484

36,620

SHOPS



A DEVELOPMENT BY
PEACHEY PROPERTY CORPORATION LTD.

Southport

Chapel Street Station Development

Adjoining new
Marks & Spencer
store facing
Woolworths,
Littlewoods and
Broadbent
Department Store.

OPENING
1972

- ★ Department Store 35,000 sq. ft. (3298m²) Let to the Co-operative Society
- ★ Supermarket 15,000 sq. ft. (1393m²) Let to Liptons
- ★ Shop Units let to Dixons, J. H. Dewhurst and Rediffusion
- ★ Car Park (400 vehicles) Let to Parking Management Ltd.

11 SHOPS TO LET

Joint Agents

TREVOR BURFIELD & CO

Regent House, 89 Kingsway, London WC2B 6RH

HEALEY & BAKER

29 St. George St. Hanover Sq. London W1R 0AE

WOOD GREEN

Finest multiple position
FIRST CLASS SHOP
Ground floor selling area 3,500 sq. ft.
Sole Agents

HERRING, DAW & MANNERS

25, ST. JAMES'S SQ., S.W.1 01-839 3423

FOLKESTONE, KENT

In first class multiple location
Shop Premises
Shop 2,500 sq. ft.
Storage 2,300 sq. ft.
Long lease for Sale.

Burrows & Co.

Tel: Ashford (STD 0233) 24321

SHOPS TO BE LET

Available in the following areas

Bedworth
Cheltenham
Didcot
East Dereham
Gateshead
Gloucester
Hoddesdon
Nuneaton
Oakengates
Preston
Shirley
Waltham Cross

Full particulars available from

RICHARD ELLIS & SON

6-10 Bruton Street
London W1X 8DU
01-499 7151

Chartered Surveyors
Office also in
City of London Scotland Belgium France
Australia South Africa

NORWICH

OPENED NOVEMBER 1st, 1971

A new office at No. 1, St. Gregory's Alley, Norwich, specialising in commercial property development and investment.
Manager — Philip D. Collyer. ARICS
telephone — Norwich 21708.

THORNTONS

CHARTERED SURVEYORS
ESTATE AGENTS

HARLAND HOUSE COMMERCIAL ROAD WIMBORNE, DORSET. TEL. WIMBORNE 62411

BIRMINGHAM

High Street, King's Heath.
Freehold Shop for Sale in first-class position.

SHIPWAY DOBLE & EARL
Tel: 01 863 8822

WANTED

Freehold dilapidated shop premises
Hants, Wilts, Dorset.
Anything considered. Agents lists
applied to — Mr. Thomas, 15, Kingsley
Road, Shirley, Southampton, Tel. 31805
(office), 76175 (evenings).

Brunswick Square Bloomsbury W.C.1

54 SHOP UNITS TO BE LET

- ★ Traffic free shopping precinct
- ★ 200 car parking spaces
- ★ Adjacent Russell Square Tube-Station
- ★ 600 flats and maisonettes over shops
- ★ Over 25,000 persons within ¼ mile
- ★ Adjacent commercial area of Holborn
- ★ 14,000 sq. ft. supermarket to let. Safeway Food Stores
- ★ Proposed opening date December 1st

Full details from Sole Letting Agents

Hillier Parker
May & Rowden

77, Grosvenor Street, London W1A 2BT
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also at Edinburgh, Sydney and Melbourne

SHERATON SECURITIES LIMITED

BUY SHOP PROPERTY
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Agents Retained.

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Financial Times

Classified Advertisement Dept
Bracken House, Cannon St.
London EC4P 4BY.

RESIDENTIAL PROPERTY

OVERSEAS PROPERTY

BARBADOS
WEST INDIES
Fine residential investment with
able freehold property. Decent
rooms, kitchen, bathroom, double
bedroom, adjacent parking. Good
Hotel. Prime location. West C
attractively priced.

Enquiries: Bank of Commerce
Company (Caribbean) Ltd.
P.O. Box 1008
Bridgetown, Barbados.
Cables: CANBANKTRUST, Barbados.

LONDON HOUSE AND FLATS

CANONARY PARK NORTH, N.
spacious early Victorian house
rooms, kitchen, bathroom, double
bedroom, adjacent parking. Good
Hotel. Prime location. West C
attractively priced.

INVESTMENT WANTED

FUNDS AVAILABLE for investment
in property, preferred by
10, Wimbledon Bridge, S.W.1. 01-947

MOTOR CARS

1970 (Sept.) MERCEDES
250 CE

COUPE, Metallic Green, 4
Leather, electric windows,
sunroof, heated rear window, front
wipers, 1600 cc engine, 130
m.p.h., 100,000 miles, excellent
condition. Only 800 miles and
in immaculate condition. This
most unusually fully equipped
and is offered at a large
discount.

Bristol Street Motors, Ltd.
Bristol Street, Birmingham.
021-622 2777. (Mr. Reid.)

1971 CADILLAC ELDORADO

Convertible, registered May 3
5,000 miles, Silver Grey, 313
Power Head, Black Leather,
Ingration, radio, 8 track tape
Front wheel drive, 8.3 litre
white-wall tyres, combined 8-
stereo and radio with clear
series. Only 800 miles and
in immaculate condition. This
most unusually fully equipped
and is offered at a large
discount.

Bristol Street Motors, Ltd.
Bristol Street, Birmingham.
021-622 2777. (Mr. Reid.)

CINEMAS (Cont)

ODEON, St. Martin's Lane, (135
Maus Forman's brilliant comedy
OFF. 1.15, 3.15, 5.15, 7.15, 9.15
4.15, 6.30, 8.50, 11.15. 11.15
day, 2.0, 4.0, 6.55, 8.15,
10.15, 12.15, 2.15, 4.15,
6.45, 8.45, 10.45.

ODEON, Marble Arch, (723 2011)
Disney Production, THE
AND BROOMSTICKS (U). A
Lansbury David Tomlinson, Sep.
Mon. 12.15, 2.15, 4.15, 6.15,
8.15, 10.15, 12.15.

PARAMOUNT, Regent Street, (339
LOVE STORY (AA). Pross. 2.15,
6.30, 8.40, 10.45.

PLAZA, Regent Street, (330 5944)
DISNEY. A.A. Pross. 2.45,
6.45, 8.50.

PRINCE CHARLES, Leicester, (437 811)
HELLO, MY NAME IS (U).
Fiction. Pross. 2.15, 4.15,
6.15, 8.15, 10.15, 12.15.

RITZ, Leicester, (437 1234, PRETTY
MILK AND HONEY (U). Pross. 2.15,
6.15, 8.15, 10.15, 12.15.

ROYAL, Leicester, (437 1234, PRETTY
MILK AND HONEY (U). Pross. 2.15,
6.15, 8.15, 10.15, 12.15.

STUDIO ONE, Oxford Circus, (337
Susan George, Home Sweet Home
Banned, FRIGHT (X). Pross. 1.30,
6.30, 8.40, 10.45.

WARNER RENAISSANCE, Leicester, (337
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MAYNARDS LIMITED OUTLOOK FAVOURABLE

The Seventy-fifth Annual General Meeting of Maynards Limited will be held on 5th November, 1971 in London.

The following are extracts from the statement by the Chairman, Mr. J. DOUGLAS MAYNARD, circulated with the Report and Accounts for the year ended 30th June, 1971:

I am pleased to report that the year has been a successful one for the company. The following are the main features of the year:

1. **Profit before tax** of £492,703 as compared with £492,703 in the previous year.

2. **Profit after tax** of £353,887, an increase of 39 per cent. Taxation, with corporation tax at 40 per cent, amounts to £138,816, leaving a profit after taxation of £215,071 (£215,071).

Your directors recommend a final dividend of 12 per cent, which, with the interim dividend of 8 per cent, amounts to a total of 20 per cent for the year. Group sales at £3,825,120 are an increase of 15 per cent.

MANUFACTURING

During the year, our manufacturing plant was kept very busy and we experienced no difficulty in selling the considerable increase in output on the new equipment to which I referred last year. This modern and highly technical plant is functioning very satisfactorily.

Over two years our export sales have increased by 85 per cent.

RETAILING

The conversion to decimal currency went through very smoothly, thanks to careful planning and the assistance of our staff. We did, however, incur considerable expense in cash tills, price marking and man-hours training. Power cuts and the postal strike also presented their problems.

The halving of the Selective Employment Tax became effective at the end of the year and had no adverse effect upon the profits here.

THE BOARD

I have decided to relinquish, as from 1st December, 1971, the office of Managing Director, which I have held for over forty years, and propose that Mr. R. W. Ramsdale and Mr. H. P. Salmon be appointed Joint Managing Directors, with Mr. G. de Galle as Deputy Chairman.

We are fortunate in having a loyal and enthusiastic team of executives with the skill to ensure the Company's continued growth, and to all who have given of their best in the interests of the Company I extend our appreciation. To this I should like to add my own personal gratitude for the support I have received at all levels throughout my many years as Managing Director.

Our confectionery shops have had an increase in sales over 10 per cent, despite the fact that they were operating from a lesser number of outlets.

The trading result of each of our shops is constantly under careful review, and we do not hesitate to close any shop that does not show a satisfactory return on the capital employed.

INTERIM STATEMENT

Cray Electronics Limited

Interim report

	Half year ended 30.6.71	Half year ended 30.6.70
Sales (excluding inter-company sales)	£548,934	£436,878
Profit before taxation	86,578	80,068
Profit after taxation	46,821	46,038

15% - 22.50% 10% - 15.00%

Sales at the level shown in the first half of 1971 were not maintained during the second half of the year. This was due to a reduced intake of orders by customers whose own production had suffered in the prevailing economic climate. The remainder of the year is however traditionally a good period for the company and deliveries are currently on the increase.

by Industrial Estate-Thames Road-Crayford-Kent
Telephone: Crayford 29251

Throughout the UK call
01-246 8026
for the latest
FT INDEX

GOMME HOLDINGS LIMITED
Increased Dividend and Scrip Issue

Financial Years ended July	1967	1968	1969	1970	1971
£'000	£'000	£'000	£'000	£'000	£'000

Profit Before Tax	477	736	746	889	943
Profit After Tax	296	423	418	482	588
Ordinary Shares					
Earnings %	32.4	48.1	48	56	67
Dividends %	22.1	25	26	30	35
Capital Expenditure	128	539	480	415	308
Total Assets	2,843	3,637	4,022	4,657	5,050
Capital Employed	1,821	2,054	2,229	2,436	2,727
Return on Capital Employed %	24.2	35.2	33.1	35.2	34.1

Since July 1967, turnover and profit have approximately doubled

Increased dividend for fifth consecutive year

One for one scrip issue

Capital expenditure in five years to July 1972 will be over £2,000,000 financed from our own resources

The Annual General Meeting of Gomme Holdings Limited will be held at Spring Gardens, High Wycombe, on Tuesday, 30th November, 1971, at 12.00 noon.

Full Report and Accounts available from the Secretary, Spring Gardens, High Wycombe.

U.K. extends oil pollution powers

FINANCIAL TIMES REPORTER

THE GOVERNMENT has now extended its powers to control and even destroy tankers threatening to pollute the U.K. coastline to cover foreign ships operating outside British territorial waters.

Under an Order in Council published yesterday, and due to come into effect on November 22, the U.K. Government is given express power to take action to preserve the coast from pollution resulting from an accident to a foreign vessel outside its waters.

Among the more draconian measures, it is enabled to take control of the ship, moving it or instructing it to discharge oil, and if it is absolutely necessary to sink or destroy the ship altogether.

Torrey Canyon

Similar powers covering all ships within U.K. territorial waters and ships flying the U.K. flag already exist under the Oil in Navigable Waters Act passed earlier this year.

The measures follow the Torrey Canyon disaster and the resulting 1969 International Convention relating to Intervention on the High Seas in cases of Oil Pollution Casualties.

The convention, which will come into force 90 days after ratification by 15 states, has so far only been ratified by the U.K., Denmark, Japan and the U.S., but the

Government considers that it is justified in taking its present action under international law.

One reason for the latest Order is to give its rights statutory backing under domestic law and to ensure that persons who suffer damage as the result of such action should not be in a position to sue the Government for damages provided that the action taken is reasonable.

The Government is also keen to encourage other countries to follow its example in ratifying and enforcing the International Convention, which is designed both to protect international law on oil pollution and also to restrain its practice.

Under this there are provisions for compensation for shipowners and others who suffer loss as a result of unnecessary and unreasonable exercise of national powers, and to ensure that proper consultation with interested parties is undertaken before any drastic action is taken.

Insurance companies and some shipowners have already expressed considerable concern at the extent of the powers taken by the U.K. Government under the Oil in Navigable Waters Act, and the International Convention.

The Department of Trade and Industry is clearly anxious to protect British shipping interests from unrestrained action abroad.

Oil in Navigable Waters (Shipping Casualties) Order 1971, SI 1971/1736; SO, 3p.

Britain wins Nobel for 'freezing' light

BY DAVID FISLOCK, SCIENCE EDITOR

A BRITISH scientist, Professor Dennis Gabor, has been awarded this year's Nobel Prize for Physics for his discovery of the holography — lensless photography — in the late 1940s.

Professor Gabor, an Emeritus Professor at Imperial College, London, is now working as a staff scientist in the CBS laboratories at Stamford, Connecticut.

He describes holography as the art of freezing a light wave into a photographic plate by means of another beam, and reviving it by laser illumination. The idea may prove the most important of all applications for the laser. It is already finding many applications, using beams of sound waves and microwaves as well as light waves.

The most exciting prospects, however, are the storage of immense quantities of information in an "optical computer," and three-dimensional TV.

Prof. Gabor discovered holography when working as a research scientist with British Thomson-Houston at Rugby after the war. It was one of those lines of research he was pursuing, aimed at improving the performance of the electron microscope.

He wanted to freeze its image in the form of a hologram (from the Greek *holo*, meaning whole, and *gramma*, message). He hoped that by reconstructing the image he would regain the detail lost through imperfections in the instrument.

Unfortunately, the ultra-violet light beams he used to reconstruct his holographic images were not powerful enough, and the idea was shelved. But an American research group revived the idea shortly after the discovery of the laser, an exceptionally brilliant source of illumination, in 1960.

Holographic methods of storing and later reviving information are thought very likely to find a mass market, for example in new kinds of cassette for home films and TV.

Canada winner

A Canadian spectroscopist, Dr. Gerhard Herzberg, has been awarded the Nobel Prize in Chemistry. The citation refers to his contribution to the knowledge of electronic structure, and the geometry of molecules, and, particularly, of free radicals.

Dr. Herzberg, aged 67, has been with the Canadian Government National Research Council in Ottawa since 1949, where until two years ago he directed the Pure Physics Division.

Curb on use of student union funds proposed

BY MICHAEL DIXON, EDUCATION CORRESPONDENT

DIRECT CONTROL by university and college authorities over the funds of their local students' unions is proposed in a Government document published today.

The document follows numerous complaints about the present confused arrangements for distributing public money for use by students' unions. The union subscriptions are estimated to be costing the public purse about £2m. a year.

There has been angry protest—particularly from some Conservative MPs—when a students' union has voted a handsome amount of taxpayers' money to some political or undiplomatic cause.

Symptom

An example is the Sussex University union's intended donations towards refugee relief and the restoration of free milk in primary schools. (The union's officers yesterday gave a temporary undertaking in the High Court not to use union funds for either purpose.)

The use of union money for purposes which would more properly be met by voluntary subscriptions from individuals, however, is not the main target of the proposals in the Government's discussion document.

The misdemeanours of a handful of unions are only a symptom of the present largely incoherent arrangements for financing the student bodies.

Local authorities are obliged to pay the union fees for most full-time students. Often, however, the authorities have no control over the level of the fees they must pay, since these can be fixed by negotiation within individual universities and colleges.

Universities and colleges which do not have to meet the cost of increases in union fees seem generally more inclined to investigate whether or not the increases are justified. Many students' unions have therefore not been held accountable for their use of public money.

Another problem

Another problem is that many students in colleges do not have their union fees paid automatically by the local authority as part of their grant. Part-timers often wish to use the students' union facilities, but are reluctant to pay the subscription.

The Government suggests the union subscription should no longer be paid either by local authorities or by the students' grant, or by individual students.

Instead, the main facilities of the students' unions would be financed from central State funds. Universities, these facilities would be funded out of an increased grant allocated through the University Grants Committee. In colleges the funds would be provided through the normal estimates procedure for local education authorities.

It would be up to the individual university or college authority to decide how much of its general budget should be used to provide and maintain the main facilities for the students' union.

QUARTERLY DIVIDENDS SINCE 1966

NATIONAL DISTILLERS CHEMICAL CORPORATION

DIVIDEND NOTICE

The Board of Directors has declared a quarterly dividend of 25½ p per share on the outstanding ordinary shares of the company, payable on December 1, 1971, to shareholders of record on November 10, 1971. The transfer books will close October 28, 1971.

RAMSEY E. JOSLIN, Vice President and Treasurer

EDWARD J. JOHNSON, Secretary

U.S. INDUSTRIAL CHEMICALS CO. INC.

AMERICAN DISTILLERS ASSOCIATION

NEW YORK

SE Council climbdown on margins

By Nicholas Leslie

THE Stock Exchange Council has climbed down on its proposals to require both a substantial increase in liquidity margins of member firms and restrictions on securities included in the liquidity margin.

In addition, the Council has given some ground on its original proposal for firms to submit accounts three months after their balance sheet date, instead of the present six, by stipulating a four-month period.

On the other hand, the Council is to make more frequent use of its powers regarding provision of information relating to broking and jobbing firms' finances. This means that spot checks on liquidity margins will be made on all member firms at least once a year, whereas as before such checks were made only when it was felt there was reason to do so.

When the Council first announced its liquidity margin (previously called solvency margin) plans, the requirement was to have been £30,000 for broking firms and £50,000 for jobbing firms. This prompted considerable discussion among members and criticism from the number. Now, it is proposed to leave the margins unchanged at £10,000 and £15,000 respectively.

Review

The explanation for this reversal is that proposals for a graduated tax incorporated in the 1971 Finance Act will not affect firms until 1974. The effect of a graduated tax replacing income tax and surtax is that firms will incur a greater liability since they are not liable for surtax. Liquidity margins will therefore remain unchanged until June, 1975, although the position will be reviewed before that date.

Another main proposal announced yesterday by the Council was that firms will be required to submit a statement signed by all partners giving computations of their firm's liquidity margin. This will be over and above accounts for each year.

Dublin to review Ulster policy to-day

BY DOMINICK J. COYLE

DUBLIN, Nov. 2

THE Government's overall policy on the Northern Ireland crisis is expected to be reviewed in some detail at a meeting of the ruling Fianna Fail Party here tomorrow.

The meeting is also likely to determine whether Mr. Lynch, the Prime Minister, will decide on an early dissolution of the Dail (Parliament) and a new general election before Christmas.

The meeting comes before a vital motion of no-confidence in Mr. James Gibbons, the present Minister for Agriculture, and a key State witness in last year's arms conspiracy trial, which led to a major split in Fianna Fail over policy towards Northern Ireland.

The Government's attitude towards the North has perceptibly hardened in recent weeks, but observers here doubt whether Mr. Lynch's gradual shift towards a hard-line position has yet gone far enough to find support with the dissidents within Fianna Fail.

Their support will be vital on November 10 if the Prime Minister is to fight off the no-confidence motion.

Security fears

A General Election in early December is bound to be fought almost exclusively on the Ulster crisis, and there is concern in many political quarters here that this could result in a marked slackening of internal security against extremist Republicans, thus leaving the IRA virtually free to move across the border at will.

Mr. Lynch is still hoping for an early political initiative from Whitehall, designed to bring about a revised system of government in Northern Ireland, in order to take credit publicly for the fact that his own brand of quiet diplomacy is having success with the British Government.

But the Prime Minister is under growing pressure from some of his back-benchers to relax security directed against Republicans and to adopt a much more

critical attitude both to the Westminster and Stormont Governments.

In particular, he is being pressed to revert to the traditional Dublin policy that national reunification is the only real and lasting solution to the present crisis.

This criticism is also reflected within the Cabinet itself, although individual Ministers have refrained from taking exception in public to Mr. Lynch's policies.

But the fact remains that no political party here can afford to go into a general election even remotely under the criticism of being "soft on the British."

Initiatives

Mr. Lynch himself is understood to take the view that the British Government may still move to take political initiatives on Northern Ireland, particularly now that the Key Common Market vote is out of the way.

The question is whether any such timetable will suit his own electoral intentions, since it is accepted here that defeat for the Government in the no-confidence motion to-morrow week must lead to an immediate dissolution of the Dail.

The Prime Minister's advisers put considerable emphasis on the fact that the public warnings by Dr. Ian Paisley that "direct rule" is now imminent in the North, have not resulted in the expected mass protest parades by Ulster Loyalists.

They are inclined to accept this as evidence that the much-feared "Protestant backlash" may be more speculation than reality, and that this should persuade the British Government to adopt "radical solutions" to the present crisis.

BASS STRIKE ENDS

A strike by 125 production and delivery workers at the Bass Charrington plant in Cornbrook, Manchester, has ended. The men had stopped on Monday demanding the reinstatement of four men suspended last week, but a brewery spokesman said yesterday that all 125 had returned to allow talks to start.

Barclays home loan period extended

Financial Times Reporter

BARCLAYS BANK is offering longer repayment periods for home improvement and house-purchase loans.

From to-day, secured home loans can be repaid over a maximum period of ten years instead of seven. Personal loans—Barclayloans—from November 15 can be extended from three to five years where the money is for some improvements costing £300 or more.

Barclays said last night that extending the repayment periods and thereby reducing monthly commitments might attract more clients.

The extension of secured home loans was not intended to match the long terms offered by building societies.

"We see this sort of loan appealing, for example, to the person with an endowment insurance policy due to mature within the 10 years, or who will be receiving a terminal payment after commuting some of his payment."

On Barclayloans, a 7.5 per cent rate of interest is charged on the amount borrowed, making a true rate of between 13.16 per cent and 13.76 per cent according to the length of the loan.

The rate of interest on secured home loans is charged on a reducing balance basis and is negotiable at a level between 3 per cent and 4 per cent above base rate (4.5 per cent), to which it is tied.

GRAND MET BUYS HOTEL IN ROME

Grand Metropolitan Hotel's yesterday announced it had acquired the 200-room Hotel De La Ville on the Via Salaria, Rome. A refurbishing programme is scheduled to start at the end of November and will continue during the next two winter seasons.

The De La Ville brings Grand Metropolitan properties in Rome up to three.

NEW ISSUE

All these securities have been sold. This announcement appears as a matter of record only.

November 3, 1971

\$20,000,000

TRW Overseas Finance N.V.

8½% Guaranteed Debentures Due 1986

Payment of Principal, Premium, if any, and Interest Unconditionally Guaranteed by

TRW INC.

Smith, Barney & Co.
Incorporated

Dresdner Bank
Aktienbank

Banque Rothschild

N. M. Rothschild & Sons
Limited

Algemene Bank Nederland N.V.	Amsterdam-Rotterdam Bank N.V.	Andresens Bank A/S
Arnhold and S. Bleichroeder, Inc.	Astaire & Co.	Baer Securities Corporation
Banca Nazionale del Lavoro	Banco Ambrosiano	Banco di Roma/Commerzbank AG/Credit Lyonnais
Bankers Trust International	Bank Mees & Hope N.V.	Bank of America
Banque de Bruxelles S.A.	Banque Europeenne de Tokyo	Banque Francaise du Commerce Extérieur
Banque Generale du Luxembourg S.A.	Banque de l'Indochine	Banque Internationale à Luxembourg S.A.
Banque Lambert S.C.S.	Banque Louis-Dreyfus	Banque Nationale de Paris
Banque de Paris et des Pays-Bas	Banque Populaire Suisse (Underwriters) S.A.	Banque de Suez et de l'Union des Mines
Banque de l'Union Europeenne	Banque de l'Union Parisienne C.F.C.B.	Banque Worms
H. Albert de Bary & Co. N.V.	Bayerische Hypotheken- und Wechsel-Bank	Bayerische Vereinsbank
Bergens Privatbank	Berliner Handels-Gesellschaft	Burkhardt & Co.
Capitallin International	Cazenove & Co.	La Centrale Finanziaria Generale S.p.A.
Clark, Dodge & Co.	Compagnie Luxembourgeoise de Banque S.A.	Continental Bank S.A.
Credit Commercial de France	Credit Industriel d'Alsace et de Lorraine S.A.	Credit Industriel et Commercial
Credit Suisse (Bahamas)	Creditanstalt-Bankverein	Credito Italiano
Den Danske Provinsbank A/S	Richard Daus & Co.	Delbruck & Co.
Deutsche Girozentrale	Dillon, Read Overseas Corporation	Eastman Dillon, Union Securities & Co.
Edilcentro S.p.A.	Euramerica Finanziaria Internazionale S.p.A.	Eurocapital S.A.
First Chicago	Fleming, Suez, Brown Brothers	Girozentrale und Bank der Österreichischen Sparkassen
Goldman Sachs International Corp.	Hambros Bank	Handelsbank in Zurich (Overseas)
Hill Samuel & Co.	W.E. Hutton & Co.	Istituto Bancario San Paolo di Torino
Kidder, Peabody & Co.	Kjøbenhavns Handelsbank	Kleinwort, Benson
Kredierbank S.A. Luxembourg	Kuwait Investment Company (S.A.K.)	Lazard Brothers & Co.
Lazard Frères & Cie	Lazard Frères & Co.	Lehman Brothers
London Multinational Bank (Underwriters)	Manufacturers Hanover	Merrill Lynch, Pierce, Fenner & Smith
Model, Roland & Co., Inc.	Samuel Montagu & Co.	Morgan Grenfell & Co.
Nordiska Föreningsbanken Ab	Den norske Creditbank	Sal. Oppenheim jr. & Cie.
Peterbroeck, Van Campenhout Securities S.A.	Pierson, Helling & Pierson	Prescott, Merrill, Turben & Co.
Privatbanken i Kjøbenhavn	Rowe & Pitman	J. Henry Schroder Wagg & Co.
Singer & Friedlander	Skandinaviska Banken	Societa Nazionale Sviluppo
Societe Generale de Banque S.A.	Stockholms Enskilda Bank	Strauss, Turnbull & Co.
Sveriges Kreditbank	Swiss Bank Corporation (Overseas)	C.G. Trinkauss Union Bank of Switzerland (Underwriters)
Vereinsbank in Hamburg	M.M. Warburg-Brinckmann, Wirtz & Co.	S.G. Warburg & Co.
Westdeutsche Landesbank	Western American Bank (Europe)	White, Weld & Co.
Girozentrale		Dean Witter & Co.

WALL STREET + OVERSEAS MARKETS

MONEY + EXCHANGES

Mild rallying attempts—up 2.12

BY OUR WALL STREET CORRESPONDENT

MILD RALLYING attempts were in progress on Wall Street today, but little success was made, although some early losses were recovered.

After falling another 7.23 to another new 1971 low of 818.63 in the first half-hour, the Dow Jones Industrial Average rallied to 827.88, for a net rise of 2.12 on the day. The NYSE All Company index recovered 16 cents to \$51.46, although declines still outnumbered gains by 821 to 646.

Volume, however, increased by 2.37m. shares to 133.3m, following some bargain hunting once early selling receded. But for the most part, investors remained on the sidelines.

OTHER MARKETS

Canada again lower

The Election Day holiday for Banks and some other firms also restrained activity.

Analysts feel the sharply depressed prices early in the session were a carryover of the market's poor showing yesterday.

Uncertainties about the Nixon Economic Programme have weighed heavily on investor sentiment. Also cited as a depressant was a prediction made by a political economist that the Nixon administration will plunge to the 500 level next year.

INDICES

NEW YORK

DOW JONES AVERAGES

Close	Home Bonds	Trans- port †	Indus. ♦	Util. ♦	Trading volume 000's
Nov. 2	72.24	225.39	827.98	111.32	13,330
1	72.24	225.32	825.86	111.29	10,960
Oct. 29	72.23	229.21	836.00	111.90	11,710
28	72.31	228.85	837.62	111.55	15,630
27	72.31	227.50	836.29	112.06	12,480
26	72.30	231.62	845.36	112.54	13,390
25	72.12	231.85	848.50	113.65	7,410
24	72.01	232.64	852.57	113.75	14,620
23	71.87	233.36	854.35	114.07	14,580
1971					

STOCK EXCHANGE REPORT

Bear closing leads to rally after widespread big falls

Index down 6.5 at 397.3 after 393.2 Gilts steadier

COUNT DEALING DATES

First Declared Last Account
 18 Oct. 28 Nov. 9
 11 Nov. 11 Nov. 23
 15 Nov. 25 Nov. 26 Dec.

New time deals may take place
 1 p.m. three times a day

Monday's drop of 13 points to
 "low" in the Dow Jones

Industrial average on optimism
 at the U.S. economic outlook

to substantial and widespread
 in London equities yesterday

a late technical rally left
 prices well above the day's

est. Down 10.6 at the 2 p.m.
 session

The Financial Times
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FOREIGN EXCHANGE

London, 3 Nov. (FT) — The pound

was usually for small

amounts of stock but was more

resistant than for some time and

was virtually non-existent

most of the day. A slight

improvement in the late afternoon

reflected a recovery in the

market's reaction to the

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MARKETS

more than 12 to 1—of falls over

risks in F.T.-quoted equities.

Helped by the fall in the U.S.

Treasury bill rates and the

U.K. currency reserve figures for

October, British Funds made a

quietly steady showing yesterday.

Mediums and longs fluctuated

narrowly before closing with

mediums down 1 to 1.5, while the

shorts finished a fraction

harder in places.

There was little demand for

investment dollars on Wall

Street's early recovery and the

premium gained 1 to 1.5 per

cent.

Yesterday saw the start of

dealing in three newcomers. Port

Farms made a bright debut,

opening at 12.5 and improving in

the course of a fairly good turn-

over to close at 12.7, compared

with the offer for sale price of

11.5. M. P. Kent opened 2p below

offer price at 4.7p, but im-

proved to end at 4.7p. Vernon

Fashion, however, finished at 4.4p,

a discount of 3p on the placing

price of 4.7p.

Home Banks, a few pence easier

during the day, picked up late to

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INSURANCE

TEXTILE WOOD

TEAS—Continued

**JONES LANG
WOOLTON**
**Chartered
Surveyors**
Lombard
**World
reserves—
quality &
quantity**
BY C. GORDON TETHER

The spectacular upsurge in international reserves that preceded the collapse of dollar convertibility in mid-August has clearly made nonsense of the global calculations on which the arrangements for annual releases of \$3,000m. odd of Special Drawing Rights to keep the international liquidity supply abreast of demand were based. But the nature and distribution of this "windfall" addition were such that the case for discontinuing SDR releases until it has been digested is by no means as strong as might appear at first sight.

In the second half of the 1960s world reserves rose from \$68,000m. to \$78,000m.—an annual rate of growth of a bare 2.00m. or 3 per cent. The year 1970, however, brought a jump of no less than \$14,000m. And the first eight months of 1971 saw the process moving into an even higher gear, the end-August figure of around \$113,000m. being up as much as \$13,000m. bond that for the opening of the year.

The assumption

The plan for the annual creation of \$3,000m. or so of SDRs—the third of which is due to take place in two months time—was based on the assumption that the growth of international liquidity under the traditional headings would slow down—much so that artificial additions to the supply would be needed to ensure that there was enough to support the continued growth of world economic activity. In the event, in less than two years the flow from the old sources has been equivalent to the amount that would be generated by a whole decade of SDR releases.

That might seem to mean that the world is now so glutted with liquidity that it will be able to make do without SDR boosts for a long time to come. And no doubt it would be altogether reasonable to see it that way if the recent massive additions to the stock had been of appropriate quality and had also been more or less evenly distributed. But in fact they have satisfied neither of these criteria.

Taken together, reserves expressed in gold and gold-linked SDRs or reserve positions in the Fund have increased by only about \$3,000m. since the beginning of last year. The remaining \$30,000m. added to stocks reflects the upsurge in the reserve currency element. This was produced in part by the continuing U.S. deficit and in part by the enthusiasm of private owners of dollars developed for off-balance sheet holdings onto central banks.

Watered down

With the dollar's short-term future looking so uncertain, this has involved a further watering down of the quality of international reserves, which to a large extent cancels out its effect on the quantitative aspect of the international liquidity problem.

Moreover, such benefit as the sharp rise in the quantity of reserves conferred has, for the most part, fallen on countries that were already well-placed in this respect—often indeed in such a comfortable position that the new inflow has been nothing more than an embarrassment. Thus, between them, Germany and Japan have accounted for almost two-thirds of the mammoth jump in reserves recorded since the beginning of 1970. Belgium, France, Italy, the Netherlands, Switzerland and Canada—all countries that had more than enough already—have absorbed most of the balance.

Excesses

Furthermore, to the extent that the growth of official reserves this year has been associated with the determination of private holders of dollars to let central banks carry the risks connected with them while waiting for the international monetary sky to clear, it is to be presumed that there will be a run-down in and when confidence in the dollar starts to revive.

Of course, if freely floating rates are to stay, the world's overall need for reserves may be materially reduced. But at the moment it seems more likely that there will eventually be a return to some kind of fixed rates pattern. In that event, and even if the new system does permit wider day-to-day variations on either side of parities than we have been used to, a large part of the world will continue to need regular additions to its liquidity stocks—and additions of appropriate quality.

This adds up to a strong argument for keeping the SDR very much in the picture. If the effect of continuing the annual releases would be to cause the total liquidity stock to become excessive, the answer does not lie in restricting the growth of SDR element. It should be sought in the early retirement of the excessive quantities of dollars at present clogging the system.

THE LEX COLUMN

Parallels in the equity market

If the view is the right one, that Wall Street's recent tumble has presented a buying opportunity rather than a sale indication, then the fun is in detecting the bottom. For it is a very sharp bounce that one would be expecting, and one which would reflect in our own equity market. Incidentally, a very obvious parallel of the kind of market fall which was a perfect buying opportunity, and which this column wrongly interpreted as an indication of lower market levels to come, was the straight 9 per cent drop to 305 in the FT index in February.

As to pinpointing the bottom, it is a fair bet that it came yesterday in New York (and London), when a plunge of over 20 DJI points in one and a bit trading sessions and light volume was dramatically reversed. The message for London is not necessarily that this is just the moment to commit medium-term funds to the equity market for we could still have some more consolidation of the February-July rise yet

to come. It is that now is no moment to be selling shares. For the Dow Jones one could make a more positive guess that the short-term downside potential is minimal with an upside of 60 points or more.

Averys

Averys' first half profit explosion has duly appeared, with a pre-tax rise from £1.26m. to £3.25m. The decimisation of the year is apparent in the latest sequence of profits for the four half-years to (effectively) June this year—£2.05m., £1.26m., £3.1m. and £3.25m. But the new factor is a forecast that the year's profit will be "considerably in excess of" last year's instead of "will match," which was the assessment in June.

On the assumption that there was very little hangover of decimal conversion demand after June, this should mean that Averys has passed reliably on to a new profit plateau from the £3m. pre-tax level of 1968 and 1969. For the forecast would seem to indicate some-

thing between £2m. and £2.5m. in the second half, implying an annual post-decimalisation profit rate of perhaps £4m. Some growth and a closer eye to the relationship of costs and prices could be the main explanation. The above figure, in any case, would indicate earnings of 9 1/2p per share, and the fact that the accounts were conservative, to judge by the tax charge, lends support to a 17 p/e at 157 1/2, up 8 1/2p yesterday.

Brooke Bond Liebig

Brooke Bond Liebig has reduced a £985,000 setback after six months to £831,000 at £12.89m. pre-tax for the year: U.K. capital allowances and lower minorities—operational problems in Tanzania—leave earnings unchanged at 4.9p per share fully diluted, which is rather better than expected. The forecast of a modest profit increase this year, on the other hand, may not set the beacons ablaze since early 1970-71 took £3m. losses on the Argentine factory, now closed, and lean

times in the U.K. tea market following stockpiling ahead of the price increase.

Yet after marked share price weakness in the past fortnight, the forecast is a useful reminder of BBL's geographic and product spread. Asia accounts for roughly 15 per cent of earnings, with a negligible contribution from Pakistan, and North America—Australia must be nearly matching that level now. Beef costs are rising in the U.K., but boosting ranch profits in South America: U.K. tea consumption is declining but there are lower leaf costs and rising value added, with group tea bag sales up by perhaps half on last year, and tea bags still account for no more than 15 per cent of the market.

As for positive arguments, Europe currently accounts for around 8 per cent of group capital employed and a similar slice of sales, up from nothing in five years. Losses last year may have approached £1m. after tax, but the group now has a dominant share in tinny soups in France, significant shares in

Germany, and the U.S. as an example of overseas marketing flair. That does not add up to anything dramatic in the immediate future, but nor does a p/e of 13.9 at 69 1/2p.

De La Rue

De La Rue's half-time story is sales still 13 per cent. higher but second quarter profits 37 per cent better at £970,000 pre-tax after a 13 per cent gain in the first three months. Margins, then, are beginning to recover—if slowly at 5.8 per cent. pre-tax to sales for the first half—and that suggests a combination of lower unit costs and higher prices, the latter certainly for Formica and Pottery in the U.K.

Formica's global profitability is still a conundrum, given another fall in second quarter minorities. But it is conceivable, given the extra-large minorities in some areas like Australia, and the reduction in the French minority stake, that there has been a partial contribution to a half yearly earnings per share rise from 4.01p

to 5.71p making 13.09p for the past reported twelve months. As for prospects, growth should be taken further in the current quarter, which was a poor one in 1970-71, and that should give an historic p/e of 16.2 at 21 1/2p something to bite on.

Smiths Industries

Smiths' turnout for 1970-71—pre-tax profits of £5.43m. against £4.16m. previously and £4.78m. in 1968-69—is ahead of the average external target but that, on its own, does not justify a 6p rise to 175p on a day like yesterday. What does, perhaps, is the broadly based nature of the rise, in a year when the spotlight was on Smiths' vehicle original equipment sales, and its commitment to BLMC in particular. OE has certainly come back to normal after a trading profit drop from £726,000 to £106,000 in 1969-70, but there is still room for growth here, and in the other divisions, in 1971-1972. The shares do not look overstretched yet on a p/e of 16.

Double explosion worst in present IRA campaign

BY JOHN GRAHAM
BELFAST, Nov. 2.

AT LEAST two people were killed and more than 30 injured this afternoon in the worst explosion Belfast has experienced since the present troubles began.

The explosion occurred at 4.30 and was, in fact, a double bombing. Four gunmen—some eyewitnesses say more—placed bombs in a public house and in a drapery shop.

In between these two buildings is a police station, which appears to have been the main target of the terrorists, since they placed their bombs as close to the connecting walls as possible.

The gunmen who put the bomb in the pub told the people inside they had 10 seconds to escape. The gunmen ran out of the pub, but the explosion took place apparently within four or five seconds. The people inside had very little chance of getting out.

Two-and-a-half hours later soldiers, policemen and firemen were still searching the rubble for bodies. The damage was enormous; the pub was simply demolished.

Even that long after the attack there was considerable confusion about exactly what had happened. There was an exchange of shots as the gunmen left the premises. It appears that as they

were running away a policeman came out of the police station, the two sides exchanged fire, but nobody was injured. Almost immediately the two bombs went off.

Although this was the worst explosion in terms of casualties yet perpetrated by the terrorists in their campaign, it was only one of many to-day. At about 11 a.m. a Government office in the centre of Belfast, the youth employment agency, was bombed for the third time. On this occasion the terrorists gave everybody plenty of time to evacuate the building, so there were no casualties, but there was very extensive damage not only to the building itself but to all surrounding shops and houses.

"Provo" warns

This evening's attack came less than a day after a warning from Mr. David O'Neill, the leader of the IRA Provisionals. At a meeting in the Mansion House, Dublin, last night he said: "The ability of the IRA to meet force with force, terror with terror, has never been greater. We shall continue to build up our strength in armaments, organisation and popular support."

"We shall cross any frontier, confront any ideology, negotiate with any people or government to acquire the means to win our

country's freedom."

Mr. O'Neill is the man who was recently sought in Amsterdam in connection with the arms shipment. His colleague in that venture, Miss McGuire, also spoke at the meeting in Dublin. "Let us bypass the politicians," she said. "This is a revolution and the essence of evolution is action. . . . We have the opportunity to defeat the British, and we must realise and grasp it now. We have the lion by the throat. . . ."

Premier's aim

This afternoon's bombing is presumably the way in which the IRA has chosen to show that it is still in business. Mr. Brian Faulkner, Prime Minister of Northern Ireland, said last night that the only way to deal with it was to defeat it militarily, by inflicting such losses upon it that it would come to the conclusion that it could not shake the will of the community or overthrow the Government.

To-day he deplored the continued bombing after what he called a week-end of senseless and callous violence. Mr. Faulkner repeated the warning to the people of Northern Ireland that there might still be setbacks in the campaign against the terrorists but that the IRA was losing arms and men all the time.

Opposition forcing debate on Northern Ireland

BY RICHARD EVANS, LOBBY CORRESPONDENT

LABOUR LEADERS have decided to force a debate on Northern Ireland within the next 10 days when the bipartisan policy between Government and Opposition, under strain for some months, will probably be broken and the Government censured for its Ulster strategy.

The "shadow" Cabinet decided against choosing Ulster as a separate subject for the debate on the Queen's Speech this week, but to wait for the publication of the report by Sir Edmund Compton on allegations of brutality by British troops against internees in Northern Ireland. This is likely to be published in about a week.

In the debate Mr. James Callaghan, "shadow" Home Secretary is expected to call for a fundamental reassessment of the whole Ulster problem including basic issues such as the reorganisation of Ireland and prospects for the withdrawal of British troops.

The Opposition fails to see how the present situation can improve if current policies are maintained and no major political initiative is introduced by Mr. Reginald Maudling, Home Secretary.

Labour leaders do not advocate direct rule from Westminster but accept that it might be necessary as a last resort.

What they believe needs further study, however, is the division of powers between Westminster and Stormont.

Mr. Callaghan is to lead a Labour Party delegation to Ulster on November 11 to meet representatives of the Northern Ireland Labour Party, the Social Democrat and Labour Party and the Dublin-based Irish Labour Party.

Other members of the delegation will be Mr. Anthony Wedgwood Benn, party chairman, Mr. Gwyn Morgan, assistant general secretary, and Mr. John Chalmers, a NEC member.

The second stage but one

Wilson-Mellish warning for pro-Market rebels

BY RICHARD EVANS, LOBBY CORRESPONDENT

A SEVERE warning to pro-Market rebels of the consequences of flouting party discipline during Common Market legislation next year will be given to the Parliamentary Labour Party to-day by Mr. Harold Wilson and Mr. Robert Mellish, his Chief Whip.

The increased determination to quell the dog-fight the party over the Common Market came after an ill-tempered meeting of Labour MPs yesterday which showed that the split following last Thursday's Commons vote is as wide as ever.

The "shadow" Cabinet's attempts to calm the conflict by refusing to table an amendment to the Queen's Speech, attacking the Government's Common Market policy, was sharply challenged by Left-Wing MPs determined to continue their campaign to force Mr. Roy Jenkins and his supporters to toe the party line.

Mr. Wilson urged MPs to accept the "shadow" Cabinet's decision, but the protests from Left-Wingers were so insistent that Mr. Douglas Houghton, the PLP chairman, decided to adjourn the debate until to-day.

After the meeting the Left-Wing Tribune Group decided to put forward Mr. Ian Mikardo to-day to press further the case for an amendment which would force Mr. Jenkins and the other 68 pro-Market rebels with the choice of repeating their rebellion of last Thursday or making an humiliating climb-down and accepting the official party line.

But the likelihood is that after the Riot Act has been read to the pro-Market rebels by Mr. Wilson and Mr. Mellish—the formula for party unity will be based on the "no abstentions" dilemma.

He did not deny that some people might change their views, but he urged the party not to rush it. Pro-Market rebels needed a little time before being asked to decide again.

In contrast, Mr. Christopher Mayhew, a pro-Market "rebel" argued that an amendment would force pro-Market rebels to the "most appalling dilemma."

He did not deny that some people might change their views, but he urged the party not to rush it. Pro-Market rebels needed a little time before being asked to decide again.

Because of his pro-Market vote last week an attempt was made by Mr. Michael English to have Mr. Houghton removed from the chair, but this was immediately ruled out of order.

Mr. Houghton remains a highly respected chairman and although a candidate will probably stand against him next week—the most likely choice is Mr. Norman Pentland, MP for Chester-le-Street, the challenge seems certain to fail.

A constitutional issue that worried some MPs was the fear that the Government planned to accede to the Treaty of Rome without the formal approval of Parliament and to introduce EEC legislation later.

Mr. Wilson tried to press the point in the Commons, but the Prime Minister parried by asking the Opposition leader to await the form the legislation would take. He could not say how many Bills there would be.

and Mr. Ray Fletcher thought an amendment essential in order to show Labour's determination to deny the Government its legislation.

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**CASHMORE
for
steel**
WEATHER
U.K. TO-DAY

Scotland, Northern Ireland most of Northern England have a dry day with sun but it will be colder than Wales, the south-west and East Anglia will be dry though rather cloudy some rain is likely in the hills. Temperatures near the seasonal level. Southern England will be dry and sunny but patches are likely early in the day. It will be warm.

London, S.E. Cent. S.W. England, Channel Dry, sunny spells. Wind light or moderate. Max. 52°F (59°F).

E. Anglia, E. and W. M. E. N.W. and Cent. N. E. Mostly dry but rather Occasional rain chiefly on Wind S.W. variable or light 11C (52°F).

Lakes, I. of Man, N.E. & Borders, E. N.W. S.W. & Glasgow, Argyll, N. & S. Sunny spells, mostly a hazy a few light showers near coasts and over hills N.W. light, rather cold. 46°F.

Edinburgh, Cent. High Dundee, Caithness, Orkney, Shetland Sunny spells, mostly dry N.W. moderate, perhaps a first Max. 50°F (40°F).

Outlook: South: Continues and rather warm. North: able with rain at times.

Lighting-up: London: 1

BUSINESS CENTRE

Y-day Mid-day

Amsterdam	C 18	55	Luxembourg	C 18	55
Brussels	C 18	55	Madrid	C 18	55
Frankfurt	C 18	55	Munich	C 18	55
Geneva	C 18	55	Nice	C 18	55
Paris	C 18	55	Rome	C 18	55
Stockholm	C 18	55	Vienna	C 18	55
Zurich	C 18	55			

HOLIDAY RESORT

Alacorti	F 23	75	Jersey	F 23	75
Alghero	F 23	75	Le Pigeon	F 23	75
Algiers	F 23	75	London	F 23	75
Athens	F 23	75	Luxembourg	F 23	75
Barcelona	F 23	75	Madrid	F 23	75
Batavia	F 23	75	Munich	F 23	75
Bombay	F 23	75	Nice	F 23	75
Buenos Aires	F 23	75	Rome	F 23	75
Calcutta	F 23	75	Vienna	F 23	75
Canton	F 23	75			
Cebu	F 23	75			
Colon	F 23	75			
Hankow	F 23	75			
Hong Kong	F 23	75			
Kobe	F 23	75			
London	F 23	75			

export to your home market

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